

FISHING IN MESOLITHIC EUROPE

Vol. II

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TABLES

Table 2.1 - Stable Isotope Values of Upper Palaeolithic Individuals

Site	Location	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	Date BP	Lab No
Brno-Francouzská 2	Czech Republic	-19.0	12.3	23680±200	OxA-8293
Dolni Vestonice 35	Czech Republic	-18.8	12.3	22840±200	OxA-8292
Kostenki 1	Russia	-18.2	15.3	32600±1100	OxA-7073
Kostenki 18	Russia	-19.1	13.1	21020±180	OxA-7128
Mal'ta 1	Russia	-18.4	12.2	19880±160	OxA-7129
Paviland 1	U K	-18.4	9.3	25840±280	OxA-8025
Sunghir 1	Russia	-19.2	11.3	22930±200	OxA-9036
Sunghir 2	Russia	-19.0	11.2	23830±220	OxA-9037
Sunghir 3	Russia	-18.9	11.3	24100±240	OxA-9038

data from Richards et al. 2001

Table 2.2 - Average Energy Values of Fish, Fish Products and Shellfish per 100g edible portion (Kcal)
per 100g edible portion (Kcal)

data from Scherz & Senger (1994) - Food Composition and Nutrition Tables

Foodstuff	Energy Value		
	Protein	Fat	Total
FISH			
Spurdog (<i>Squalus acanthias</i>)	50.40	130.50	180.90
Flounder (<i>Platichthys flesus</i>)	66.00	6.30	72.30
Halibut (<i>Hippoglossus hippoglossus</i>)	80.40	15.31	95.71
Herring (<i>Clupea harengus</i>)	72.80	160.20	233.00
Baltic Sea Herring (<i>Clupea harengus membras</i>)	72.40	82.35	154.75
Cod (<i>Gadus morhua</i>)	70.80	5.73	76.53
Wolffish (<i>Anarhichas lupus</i>)	63.20	17.62	80.82
Dab (<i>Limanda limanda</i>)	69.10	13.95	83.05
Saithe (<i>Pollachius virens</i>)	73.20	8.07	81.27
Ling (<i>Molva molva</i>)	76.00	5.50	81.50
Torsk (<i>Brosme brosme</i>)	69.20	4.74	73.94
Mackerel (<i>Scomber scombrus</i>)	74.80	107.10	181.90
Mullet (Mugilidae)	81.60	38.70	120.30
Skate (<i>Raja</i> sp.)	82.18	11.30	93.48
Redfish (<i>Sebastes marinus</i>)	72.80	32.49	105.29
Haddock (<i>Melanogrammus aeglefinus</i>)	71.60	5.49	77.09
Plaice (<i>Pleuronectes platessa</i>)	68.40	17.10	85.50
Swordfish (<i>Xiphias gladius</i>)	77.60	39.60	117.20
Hake (<i>Merluccius merluccius</i>)	68.80	22.88	91.68
Sole (<i>Solea vulgaris</i>)	70.00	12.33	82.33
Turbot (<i>Psetta maxima</i>)	66.80	15.57	82.37
Smelt (<i>Osmerus eperlanus</i>)	69.60	15.30	84.90
Horse mackerel (<i>Trachurus trachurus</i>)	79.00	34.65	113.65
Sturgeon (Acipenseridae)	72.40	17.10	89.50
Tuna (<i>Thunnus</i> sp.)	86.00	139.50	225.50
Eel (<i>Anguilla anguilla</i>)	60.00	220.50	280.50
Perch (<i>Perca fluviatilis</i>)	73.60	7.20	80.80
Bream (<i>Abramis brama</i>)	66.40	49.41	115.81
Trout (<i>Salmo trutta</i>)	78.00	24.57	102.57
Pike (<i>Esox lucius</i>)	73.60	7.65	81.25
Carp (<i>Cyprinus carpio</i>)	72.00	43.20	115.20
Salmon (<i>Salmo salar</i>)	79.60	122.40	202.00
Whitefish (<i>Coregonus</i> sp.)	71.20	28.89	100.09
Tench (<i>Tinca tinca</i>)	70.80	6.66	77.46
Catfish (<i>Siluris glanis</i>)	61.20	101.70	162.90
Pike-perch (<i>Stizostedion lucioperca</i>)	76.80	6.57	83.37

Table 2.2 (contd)

Foodstuff	Energy Value		
	Protein	Fat	Total
FISH PRODUCTS			
Shark Oil		895.50	895.50
Herring Oil		900.00	900.00
Whale Oil		895.00	895.00
Herring Milt	83.60	25.47	109.07
Herring Roe	104.00	27.45	131.45
Smoked Eel	71.60	257.40	329.00
Smoked Catfish	92.00	32.22	124.22
Caviar	104.40	139.50	243.90
Smoked Mackerel	82.80	139.50	222.30
Smoked Saithe	91.20	7.29	98.49
Stockfish	316.80	22.50	339.30
OTHER AQUATIC RESOURCES			
Oyster (<i>Ostrea edulis</i>)	36.00	10.80	66.00
Brownshrimp (<i>Crangon crangon</i>)	74.40	12.96	87.36
Lobster (<i>Homarus</i> sp.)	63.60	17.10	80.70
Crayfish (<i>Astacus fluviatilis</i>)	60.00	4.23	64.23
Krill (<i>Euphausia superba</i>)	60.00	30.60	90.60
Crawfish (<i>Palinurus</i> sp., <i>Panulirus</i> sp., <i>Jasus</i> sp.)	68.80	9.90	83.90
Mussel (<i>Mytilus edulis</i>)	39.36	12.06	51.42
Scallop (Pectinidae)	62.40	0.90	63.30
Cuttlefish (<i>Sepia</i> sp., <i>Sepiola</i> sp.)	64.40	8.10	72.50

Table 2.3 - Average Vitamin and Mineral Content of Fish, Fish Products and Shellfish per 100g edible portion

data from Scherz & Sener (1994) - Food Composition and Nutrition Tables

Foodstuff	Vitamin/Mineral							
	Iodine (mg)	Bromine (mg)	Sodium (mg)	Potassium (g)	Magnesium (mg)	Calcium (mg)	Manganese (mcg)	Cobalt (mcg)
FISH								
Spurdog			17.00		23.00	0.01	87.00	0.51
Flounder			92.00	0.33	24.00	27.00	39.00	0.54
Halibut			67.00	0.45	28.00	14.00	12.00	0.55
Herring			117.00	0.36	31.00	34.00		1.10
Baltic Sea Herring			74.00	0.37		60.00	19.01	0.99
Cod		0.82	72.00	0.36	25.00	24.00	17.00	0.44
Wolffish			105.00	0.28	27.00	20.00		1.00
Dab			77.25	0.35	24.00	24.29	40.00	0.29
Saithe		0.93	81.30	0.37		14.00		1.00
Ling		0.65	107.00	0.33	62.00	15.00		0.70
Skate			90.00	0.25		38.00		0.75
Haddock		0.64	116.00	0.30	24.00	18.00	20.00	0.61
Plaice		0.56	104.00	0.31	22.00	61.00	30.00	0.90
Eel			65.00	0.22	21.00	17.00	25.00	0.60
Perch			47.00	0.33	20.00	20.00		1.00
Bream			30.88	0.48	59.86	53.25	92.43	0.88
Trout		0.33	62.86	0.41	26.27	11.60	30.00	0.44
Pike			74.63	0.30	27.57	20.38	43.25	0.62
Carp			30.00	0.39	51.43	63.20	55.00	0.70
Salmon			51.00	0.37	29.00	13.00	14000.00	1.00
Tench			32.80	0.37	50.57	58.43	95.00	0.84
Pike-Perch			23.77	0.38	50.31	49.29	90.00	0.75
FISH PRODUCTS								
Herring Oil	0.12	0.66						
Herring Milt			118.00	0.36				
Herring Roe			91.00	0.22				
Smoked Eel			500.00	0.20	18.00	19.00	28.00	0.67
Stockfish			500.00	1.50		60.00		4.30
SHELLFISH								
Oyster				0.18		82.00	600.00	5.80
Mussel			296.00	0.28	36.00	27.00	180.00	5.12
Scallop						26.00		1.80

Table 2.3 (contd)

Foodstuff	Vitamin/Mineral								
	Copper (mg)	Zinc (mg)	Nickel (mcg)	Chromium (mcg)	Vanadium (mcg)	Molybdenum (mcg)	Aluminium (mcg)	Phosphorus (g)	Chloride (mg)
FISH									
Spurdog	0.06	0.30	3.00						
Flounder	0.05	0.50	3.00	2.00				0.20	127.00
Halibut	0.20			1.00				0.20	210.00
Herring	0.32		12.20					0.25	145.00
Baltic Sea Herring	0.01	0.93	11.00				8.50	0.24	
Cod	0.23	0.50	2.00	1.00	19.00		8.60	0.18	159.00
Wolffish								0.18	180.00
Dab	21.00	547.00							
Saithe								0.30	300.00
Ling								0.22	
Skate		0.98						0.16	
Haddock	0.23	0.30						0.18	
Plaice	0.35							0.20	127.00
Eel	0.89	1.75	3.00	13.00				0.22	52.00
Perch								0.20	
Bream	0.14	0.92	17.00			19.00	175.00	0.26	
Trout	0.15	0.51	2.00	1.00				0.25	
Pike	0.57	0.67	18.40	6.00				0.22	
Carp	0.87	0.90	23.61			38.23	145.00	0.25	50.00
Salmon	0.20	0.80	2.00					0.27	
Tench	0.11	1.10	75.00			51.00	75.00	0.21	50.00
Pike-Perch	0.10	0.80	14.00			51.00	145.00	0.19	41.00
FISH PRODUCTS									
Herring Oil									
Herring Milt									
Herring Roe									
Smoked Eel	0.12	0.47						0.25	724.00
Stockfish								0.45	
SHELLFISH									
Oyster	2.50		18.50	9.00	11.00			0.16	
Mussel	0.17	2.70				56.00		0.25	463.00
Scallop			340.00					0.21	

Table 2.3 (contd)

Foodstuff	Vitamin/Mineral								
	Fluoride (mcg)	Iodide (mcg)	Boron (mcg)	Selenium (mcg)	Vitamin A (mcg)	Vitamin D (mcg)	Vitamin E (mg)	Vitamin K (mcg)	Vitamin B1 (mcg)
FISH									
Spurdog									
Flounder	30.00	6.29		45.71	9.90		0.36		0.22
Halibut		52.00			32.00	5.00	0.85		0.08
Herring		39.00		54.79	38.00	26.71	1.50		0.04
Baltic Sea Herring		50.00			9.71	7.80	1.98		0.06
Cod	28.00	170.00	130.00	27.88	6.53	1.30	1.00		0.06
Wolfish	6.00				18.00	0.50			0.20
Dab		30.00		55.00	14.00	1.50	0.40		0.10
Saithe		200.00		31.00	5.63				0.09
Ling				35.82			0.30		
Skate					3.00				0.02
Haddock	35.00	243.00	35.00	28.57	17.00		0.39		0.05
Plaice		52.50		33.45					0.21
Eel	30.00	4.00	30.00	31.00	980.00	20.00			0.18
Perch		4.00		24.00	6.52		1.47		0.08
Bream				72.00	4.20		0.00		
Trout	30.00	3.53		24.53	32.14		1.67		0.08
Pike	80.00			17.50	13.67		0.91		0.09
Carp	32.00	1.70			44.00				0.07
Salmon	30.00	34.00	40.00	26.00	41.00	16.30	2.23		0.17
Tench					1.00				0.08
Pike-Perch				26.00					0.16
FISH PRODUCTS									
Herring Oil				13.50					
Herring Milt									0.04
Herring Roe							5.04		65.00
Smoked Eel	180.00	4.50			940.00	90.00			0.19
Stockfish	500.00								0.09
SHELLFISH									
Oyster	120.00	58.00		27.75	93.00	8.00	0.85	0.10	0.16
Mussel		130.00	295.00	43.00	54.00		0.75		0.16
Scallop				51.00					0.04

Table 2.3 (contd)

Foodstuff							
	Vitamin B2 (mcg)	Panathotenic Acid (mg)	Vitamin B6 (mg)	Biotin (mcg)	Folic Acid (mcg)	Vitamin B12 (mcg)	Vitamin C (mg)
FISH							
Spurdog							
Flounder	0.21		0.25		11.00	1.00	
Halibut	0.07	0.31	0.42	3.10	8.60	1.00	
Herring	0.22	0.94	0.45	4.50	5.00	8.50	
Baltic Sea Herring	0.24	9.30				11.00	
Cod	0.05	0.26	0.20	2.20	7.96	1.16	2.00
Wolffish	0.06						
Dab	0.08	0.86	0.19	1.20	5.00	1.50	
Saithe	0.35					3.50	
Ling	0.08	0.32				0.55	
Skate	0.01						
Haddock	0.17	0.22		2.50	8.90	0.74	
Plaice	0.22	0.80	0.22		11.00	1.45	1.50
Eel	0.32		0.28		13.00	1.00	1.80
Perch	0.12						
Bream							
Trout	0.08	1.72		4.50	9.23		
Pike	0.06		0.15				
Carp	0.05		0.15				1.00
Salmon	0.17	1.02	0.89	7.40	3.40	2.89	1.00
Tench	0.18						1.00
Pike-Perch	0.25						1.00
FISH PRODUCTS							
Herring Oil							
Herring Milt	0.60						
Herring Roe	390.00						
Smoked Eel	0.37		0.16			1.00	
Stockfish	0.11		0.20			1.00	
SHELLFISH							
Oyster	0.20	0.32	0.22	10.00	7.00	14.60	
Mussel	0.22		0.08		33.00	8.00	3.20
Scallop	0.08	0.15		1.10	10.70	1.81	

Resources with very high, specific, mineral/vitamin content are highlighted

Table 2.4 - Average Energy Values of Terrestrial Resources per 100g edible portion (Kcal)

data from Scherz & Senser (1994) - Food Composition and Nutrition Tables

Foodstuff	Energy Value		
	Protein	Fat	Total
TERRESTRIAL RESOURCE			
Beef muscle	88.00	17.10	107.44
Beef - intermuscular adipose tissue	32.80	638.10	670.90
Beef - subcutaneous adipose tissue	6.00	846.00	852.00
Ox Blood	71.20	1.17	72.37
Ox Tongue	64.00	143.10	207.10
Pork - muscle only	88.00	16.74	104.74
Pork - intermuscular adipose tissue	18.80	690.30	709.10
Pork - belly	71.20	189.90	261.10
Pig's Blood	74.00	0.99	75.23
Rabbit Meat	83.20	68.58	151.78
Horse Meat	82.40	24.03	108.03
Goat Meat	78.00	70.92	148.92
Edible Snail (<i>Helix pomatia</i>)	51.04	10.80	61.84
Hazelnut (<i>Corylus avellana</i>)	47.84	554.40	644.40

Includes foodstuffs known to have been exploited by Mesolithic groups for which published energy values are available

Table 2.5 - Average Vitamin and Mineral Content of Terrestrial Resources per 100g edible portion

data from Scherz & Senser (1994) - Food Composition and Nutrition Tables

Foodstuff	Vitamin/Mineral								
	Iodine (mg)	Bromine (mg)	Sodium (mg)	Potassium (g)	Magnesium (mg)	Calcium (mg)	Manganese (mcg)	Iron (mg)	Cobalt (mcg)
TERRESTRIAL RESOURCES									
Beef - muscle			65.97	0.36	22.99	5.88	22.00	2.16	0.27
Beef -adipose tissue			29.00	0.07				0.75	
Ox Blood			330.00	0.04	5.00	6.00		49.00	
Ox Tongue			100.00	0.25	10.00	9.50		3.00	
Pork - muscle			56.00	0.42	27.00	3.20	80.00	1.09	0.10
Pork - adipose tissue			18.00	0.09				0.29	
Pork - belly			59.00	0.15		0.90			
Pork's Blood			207.00	0.19	20.00	5.00		55.00	
Rabbit Meat			47.00	0.38	29.00	14.00		3.50	
Horse Meat			44.00	0.33	23.00	12.60		4.70	
Goat Meat						9.50		1.95	
Hazelnut			2.00	0.63	156.00	226.00	5700.00	3.80	12.00

Foodstuff	Vitamin/Mineral								
	Copper (mg)	Zinc (mg)	Nickel (mcg)	Chromium (mcg)	Vanadium (mcg)	Molybdenum (mcg)	Aluminium (mcg)	Phosphorus (g)	Chloride (mg)
TERRESTRIAL RESOURCES									
Beef - muscle	87.56	4.29	6.04	5.39		28.00	5.00	0.19	52.00
Beef -adipose tissue		1.00							
Ox Blood		0.20						0.02	304.00
Ox Tongue								0.23	13.00
Pork - muscle	0.05	2.00	5.28	3.78		27.00	3.18	0.20	
Pork - adipose tissue		0.53							
Pork - belly								0.06	
Pork's Blood								0.05	262.00
Rabbit Meat								0.22	51.00
Horse Meat								0.19	9.00
Goat Meat									
Hazelnut	0.13	1.87	122.00	14.00				0.33	10.00

Table 2.5 (contd)

Foodstuff	Vitamin/Mineral								
	Fluoride (mcg)	Iodide (mcg)	Boron (mcg)	Selenium (mcg)	Vitamin A (mcg)	Vitamin D (mcg)	Vitamin E (mg)	Vitamin K (mcg)	Vitamin B1 (mcg)
TERRESTRIAL RESOURCES									
Beef - muscle		6.80	45.00	5.24	20.00		0.48	12.50	0.23
Beef -adipose tissue									0.04
Ox Blood					21.00				0.09
Ox Tongue					4.00		0.26		0.14
Pork - muscle		5.20	46.00	8.73	6.00		0.41	18.00	0.90
Pork - adipose tissue									0.13
Pork - belly									
Pork's Blood					30.00				0.09
Rabbit Meat					0.30				0.11
Horse Meat			45.00		21.00				0.11
Goat Meat					36.00				0.15
Hazelnut	17.00	1.50	2150.00	4.48	4.83		26.29	9.00	0.39

Foodstuff	Vitamin/Mineral							
	Vitamin B2 (mcg)	Pantho- tentic Acid (mg)	Nicotina- mide (mg)	Vitamin B6 (mg)	Biotin (mcg)	Folic Acid (mcg)	Vitamin B12 (mcg)	Vitamin C (mg)
TERRESTRIAL RESOURCES								
Beef - muscle	0.26	0.60	7.50	0.19	3.00	3.00	5.00	
Beef -adipose tissue	0.07		1.42				1.46	
Ox Blood	0.03		0.85					
Ox Tongue	0.29	0.00	4.60	0.13	3.30			
Pork - muscle	0.23	0.70	5.00	0.57	5.00	2.50	2.04	
Pork - adipose tissue	0.08		1.58				0.29	
Pork - belly								
Pork's Blood	0.03		0.55					
Rabbit Meat	0.07		8.60	0.30				
Horse Meat	0.15		4.60	0.50			3.00	
Goat Meat	0.28		4.90	0.30				
Hazelnut	0.21	1.15						

Resources with very high, specific, mineral/vitamin content are highlighted

Table 2.6 - Human Vitamin and Mineral Requirements

Table 2.6a Essential Function of Vitamins

Vitamin/Mineral	Essential Function
Biotin (vit H)	breakdown of fatty acids & carbohydrates . manufacture of fats excretion of products of protein breakdown
Calcium	formation & maintenance of bones & teeth blood clotting transmission of nerve impulses contraction of muscle
Chromium	breakdown of sugar manufacture of certain fats
Copper	formation of red blood cells pigment use of vitamin C production of collagen & elastin
Fluoride	strengthens bones & teeth
Folic Acid	manufacture of nucleic acids formation of red blood cells development & function of nervous system
Iodine	formation of thyroid hormone
Iron	formation of red blood cells uptake of oxygen conversion of blood sugar to energy
Magnesium	formation of healthy bones & teeth , & conversion of blood sugar into energy transmission of nerve impulses contraction of muscle
Niacin	production of energy from blood sugar manufacture of fats function of nervous system function of digestive system manufacture of sex hormones
Panhotenic Acid (vit B5)	production of energy from sugars & fat function of nervous system & adrenal glands utilisation of other vitamins manufacture of fats & corticosteroids
Potassium	controls water balance conduction of nerve impulses contraction of muscle maintenance of normal heart rhythm
Pyridoxin (vit B6)	breakdown of proteins carbohydrates & fats manufacture of niacin release of carbohydrates stored in liver & muscle production of red blood cells & antibodies healthy digestion normal function of central nervous system production of sex hormones

Table 2.6a (contd)

Vitamin/Mineral	Essential Function
Riboflavin (vit B2)	breakdown of carbohydrates, fats & protein production of energy in cells using oxygen utilisation of other B vitamins production of hormones by adrenal gland
Selenium	preserves elasticity in tissues improves oxygen supply to heart necessary for formation of prostaglandins
Sodium	controls water balance conduction of nerve impulses contraction of muscle maintenance of normal heart rhythm
Thiamin (vit B1)	breakdown & utilisation of carbohydrates healthy nervous system healthy muscles normal heart function
Vitamin A	normal bone & tooth growth normal vision fertility
Vitamin B12	manufacture of genetic material for cells formation of red blood cells by bone marrow utilisation of folic acid & carbohydrates maintaining healthy nervous system
Vitamin C	growth & maintenance of bones, ligaments & blood vessels manufacture of neurotransmitters & adrenal hormones immune responses to infection & wound healing utilisation of folic acid absorption of iron
Vitamin D Vitamin E	regulates balance of calcium & phosphate aids absorption of calcium healthy cell structure formation of red blood cells production of energy in heart & muscles
Vitamin K	formation in liver of clotting factors
Zinc	manufacture of proteins & nucleic acids function of insulin normal rate of growth development of reproductive organs healing of wounds & burns

Table 2.6b - Requirements & Sources of Vitamins & Minerals

Vitamin/Mineral	Daily Requirement	Best Sources
Biotin (vit H)	10-200mcg	liver nuts beans egg yolk
Calcium	525mg birth-1 year 350mg 1-3 years 450mg 4-6 years 550mg 7-10 years 1000mg males 11-18 800mg females 11-18 700mg over 18 years 550mg lactation increase	dairy produce green leafy vegetables nuts dried beans
Chromium	safe intake <25mcg	meat wholemeal cereals dairy produce
Copper	0.2mg birth-3months 0.3mg 4mo-1year 0.4mg 1-3 years 0.6mg 4-6 years 0.7mg 7-10 years 0.8mg 11-14 years 1.0mg 15-18 years 1.2mg over 18 years	liver shellfish nuts wholemeal cereals mushrooms
Fluoride	No RDI 0.15mg safe for infants 0.5mg safe for <2 years	
Folic Acid	50mcg birth-1 year 70mcg 1-3 years 100mcg 4-6 years 150mcg 7-10 years 200mcg over 10 years increase in pregnancy & lactation	green leafy vegetables liver root vegetables nuts egg yolk
Iodine	50mcg birth-3 mo 60mcg 4mo-1year 70mcg 1-3 years 100mcg 4-6 years 110mcg 7-10 years 130mcg 11-14 years 140mcg over 14 years	seafood dairy produce
Iron	1.7mg birth - 3 mo 4.3mg 4-6mo 7.8mg 7mo-1 year 6.9mg 1-3 years 6.1mg 4-6 years 8.7mg 7-10 years 11.3mg males 11-18 14.8mg females 11-50 8.7mg males over 18 8.7mg females over 50 increased during pregnancy	Liver is best source

Table 2.6b (contd)

Vitamin/Mineral	Daily Requirement	Best Sources
Magnesium	55mg birth-3mo 60mg 4-6mo 75mg 7-9mo 80mg 10-12 mo 85mg 1-3 years 120mg 4-6 years 200mg 7-10 years 280mg 11-14 years 300mg males over 14 300mg females 15-18 270mg females over 18 increase during lactation	green leafy vegetables nuts
Niacin	3mg birth-3mo 4mg 7-9mo 5mg 10-12 mo 8mg 1-3 years 11mg 4-6 years 12mg males 7-10 12mg females 7-14 15mg males 11-14 18mg males 15-18 14mg females 15-18 17mg males 19-50 13 mg females 19-50 16mg males over 50 123mg females over 50	liver lean meat poultry fish nuts
Panthotenic Acid (vit B5)	No RDI 3-7mg recommended	liver fish
Potassium	0.8g birth-3 mo 0.85g 4-6mo 0.7g 7mo-1 year 0.8g 1-3 years 1.1g 4-6 years 2g 7-10 years 3.1g 11-14 years 3.5g over 14 years	green leafy vegetables oranges lean meat milk
Pyridoxin (vit B6)	0.2mg birth-6mo 0.3mg 7-9mo 0.4mg 10mo-1 year 0.7mg 1-3 years 0.9mg 4-6 years 1mg males 7-10 years 1mg females 7-14 years 1.2mg males 11-14 1.5mg males 15-18 1.2mg females over 14 1.4mg males over 18	liver poultry fish eggs wholemeal cereals

Table 2.6b (contd)

Vitamin/Mineral	Daily Requirement	Best Sources
Riboflavin (vit B2)	0.4mg birth-1 year 0.6mg 1-3 years 0.8mg 4-6 years 1mg 7-10 years 1.2mg males 11-14 1.1mg females over 10 1.3mg males over 14 increase during pregnancy increase during lactation	liver dairy produce wholemeal cereals green leafy vegetables pulses
Selenium	10mcg birth-3mo 13mcg 4-6mo 10mcg 7mo-1year 15mcg 1-3 years 20mcg 4-6 years 30mcg 7-10 years 45mcg 11-14 years 70mcg males 15-18 60mcg females over 14 75mcg males over 18 75mcg in lactating females	meat fish wholemeal cereals dairy produce
Sodium	0.21mg birth-3mo 0.28g 4-6mo 0.32g 7-9mo 0.35g 10mo-1year 0.5g 1-3 years 0.7g 4-6 years 1.2g 7-10 years 1.6g over 10 years	All foods
Thiamin (vit B1)	0.2mg birth-9mo 0.3mg 10mo-1year 0.5mg 1-3 years 0.7mg males 4-10 0.7mg females 4-14 0.9mg males 11-14 1.1mg males 15-18 0.8mg females over 15 1mg males 19-50 0.9mg males over 50 0.9mg in pregnancy 1.1mg in lactating females	pork liver fish nuts eggs pulses
Vitamin A	350mcg up to 1 year 400mcg 1-3 years 500mcg 4-10 years 600mcg males 11-14 600mcg females over 10 700mcg males over 14 700mcg during pregnancy 950mcg in lactating females	liver fish liver oil eggs dairy produce green vegetables citrus fruits

Table 2.6b (contd)

Vitamin/Mineral	Daily Requirement	Best Sources
Vitamin B12	0.3mcg birth-6mo 0.4mcg 7mo-1 year 0.5mcg 1-3 years 0.8mcg 4-6 years 1mcg 7-10 years 1.2mcg 11-14 years 1.5mcg over 15 2mcg in lactating females	liver most animal products seaweed
Vitamin C	25mg birth- 1 year 30mg 1-10 years 35mg 11-14 years 40mg over 14 50mg during pregnancy 70mg while breast feeding	fresh fruits vegetables
Vitamin D	8.5mcg birth-6mo 7mcg 7mo-3 years 10mcg over 65 10mcg in pregnancy & lactation other groups - no vit D requirement	fatty fish liver dairy produce egg yolks
Vitamin E	3mg birth-6mo 4mg 7mo-1year 6mg 1-3years 7mg 4-10years 10mg males over 10 8mg females over 10 10mg in pregnancy & lactation	vegetable oils are best source
Vitamin K	10mcg 6mo-1year 15mcg 1-3 years 20mcg 4-6 years 30mcg 7-10 years 45mcg 11-14 years 65mcg males 15-18 55mcg females 15-18 70mcg males 19-24 60mcg females 19-24 80mcg males over 24 65mcg females over 24	green leafy vegetables root vegetables fruits seeds milk
Zinc	4mg birth-6mo 5mg 7mo-3 years 6.5mg 4-6years 7mg 7-10 years 9mg 11-14 years 9.5mg males over 14 7mg females over 14 13mg in lactating females	best source = lean meat seafoods

* - liver and liver oils should not be consumed by pregnant women

Table 2.6c - Vitamin & Mineral Deficiency & Excess

Vitamin/Mineral	Symptoms of Deficiency	Symptoms of Excess
Biotin (vit H)	fatigue poor appetite hair loss, excema inflammation of tongue	None known
Calcium	long term = rickets osteoporosis osteomalacia	Reduced Fe & Zn absorption kidney stones
Chromium	sugar malabsorption	toxicity inflammation of skin
Copper	anaemia fatigue shortness of breath palpitations	10-15mg = toxic vomiting abdominal pain diarrhoea haemolytic anaemia liver & kidney damage
Fluoride	increased risk of caries	large quantities result in slow poisoning
Folic Acid	anaemia causing fatigue loss of appetite nausea hair loss mouth sores poor growth in infants	No effects but may worsen B12 deficiency
Iodine	goitre and hypothyroidism causing tiredness, physical and mental slowness, weight gain, facial puffiness and constipation	No effects
Iron	anaemia shortness of breath fatigue palpitations	poisonous vomiting lowered blood pressure congestive heart failure cirrhosis of the liver diabetes mellitus abdominal pain
Magnesium	confusion tremors palpitations	toxicity is rare kidney disease
Niacin	pellagra	> 50mg = headache larger doses = nausea, stomach ulcers >2g = gout liver damage high blood sugar

Table 2.6c (contd)

Vitamin/Mineral	Symptoms of Deficiency	Symptoms of Excess
Panthotenic Acid (vit B5)	low blood sugar general ill-health	No known toxic effects
Potassium	muscle weakness & fatigue mental confusion disturbance of heart rhythm paralysis of skeletal muscles	>18g and cause disturbs heart rhythm muscular paralysis
Pyridoxin (vit B6)	weakness anxiety skin disorders inflammation of skin & tongue anaemia	prolonged daily intake of >500mg leads to CNS damage
Riboflavin (vit B2)	chapped lips mouth sores itching eyes blurred vision	No known harmful effects large doses can deplete other B vitamins
Selenium	long term deficiency causes loss of stamina reduced elasticity of tissues muscle pain and tenderness fatal heart disease in children	Most poisonous of dietary minerals: causes baldness & loss of nails fatigue vomiting daily intake should not exceed 450mcg
Sodium	diarrhoea & vomiting excessive perspiration lethargy muscle cramps low blood pressure palpitations dizziness & fainting	high blood pressure results in increased risk of heart disease stroke kidney damage fluid retention
Thiamin (vit B1)	fatigue, irritability loss of appetite disturbed sleep confusion loss of memory abdominal pain beri beri	No effects High doses may reduce other B vitamins
Vitamin A	night blindness loss of appetite reduced resistance to infection weakness of bones & teeth corneal ulcers diarrhoea	Prolonged excessive intake headache nausea & diarrhoea fatigue bone pain enlargement of liver & spleen birth defects

Table 2.6c (contd)

Vitamin/Mineral	Symptoms of Deficiency	Symptoms of Excess
Vitamin B12	liver can store 6 years supply anaemia affects brain & spinal cord causing tingling, numbness, memory loss & depression	Effects unknown
Vitamin C	weakness & pains scurvy resulting in weak bones & loose teeth abnormal bone development in children anaemia	Few effects > 1g daily may cause diarrhoea & nausea stomach cramps nausea
Vitamin D	long term deficiency leads to lead low levels of calcium & phosphate results in softened bones = rickets (children) osteomalacia (adults)	prolonged high doses weakness unusual thirst gastrointestinal disturbance abnormal calcium deposits
Vitamin E	haemolysis resulting in anaemia irritability & fluid retention (infants)	Effects rare prolonged intake > 250mg = nausea & vomiting abdominal pain diarrhoea
Vitamin K	low levels of clotting factors = delayed blood clotting tendency to bleed internally	No known harmful effects
Zinc	loss of appetite impaired sense of taste poor growth in children prolonged deficiency = skin disorders	Low risk of harmful effects may interfere with Fe & Cu absorption resulting in nausea & vomiting headache fever malaise abdominal pain

Table 2.7 - The Dietary Source of the Protein Constituent of Collagen

Dietary Protein (%)	Contribution of Carbohydrate to Collagen (%)
5	49-58
20	29-34
70	5-12

Data from Ambrose & Norr 1993.

Table 2.8 Stable isotope values of Mesolithic individuals

Site	Material	^{13}C	^{15}N	Date	Lab No
Argus		marine		Mesolithic	
Birsmatten-Basisgrotte	rib	-20.8		6290±80BP	OxA-2238
Bottendorf, Germany	cranium	-20.7		5950±80BP	OxA-2919
Bottendorf, Germany	rib	-20.5		6160±80BP	OxA-2922
Cabeco da Arruda		-19.0	12.2	6970±60	
Cabeco da Arruda		-18.9	10.3	6780±80	
Cabeco da Arruda		-15.3	12.5	6360±80	
Cabeco da Arruda		-17.7	11.2	6990±110	
Cabeco da Arruda		-17.2	11.8	6960±70	
Casteal nan Gilleann II	metatarsal	-15.8	14.6	Late Mesolithic	
Cnoc Coig	right claviclefemale?	-13.2	14.5	Late Mesolithic	
Cnoc Coig	left claviclemale?	-12.3	16.0	Late Mesolithic	
Cnoc Coig	metacarpal	-12.0	14.7	Late Mesolithic	
Cnoc Coig	metacarpal	-12.0	17.0	Late Mesolithic	
Cnoc Coig	frontal	-13.6	15.2	Late Mesolithic	
Cnoc Coig		-12.4		5740±65BP	OxA-8004
Cnoc Coig		-16.0		5480±65BP	OxA-8005
Cnoc Coig		-12.0		5495±55BP	OxA-8014
Cnoc Coig		-12.4		5615±45BP	
Daylight Rock, Caldey		-15.9		8655±40BP	OxA-7685
Durrenburg, Germany	rib	-19.2		7930±90BP	OxA-3136
Foxhole, Gower		-20.0	11.3	Early Meso	
Goldcliff		-21.4	9.6	Late Meso	OxA-7659
Goldcliff		-20.8	10.1	Late Meso	OxA-7744
Gross Fredenwalde, Templin Germany		-19.3		7660±80BP	OxA-3697
Gross Fredenwalde, Templin Germany		-19.3		7390±80BP	OxA-3698
Grotte Margaux, Namur		-19.5		9530±120BP	OxA-3533
Grotte Margaux, Namur		-19.4		9350±120BP	OxA-3534
Hoedic	infant: A (12)	-14.0	14.4	7165±60BP	OxA-6708
Hoedic	young/mid adult F: B (1)	-14.9	12.3	5080±55BP	OxA-6705
Hoedic	young adult M: C1 (2)	-14.0	14.2	6280±60BP	OxA-6706
Hoedic	infant: C2 (3)	-14.5	13.8	Late Meso	
Hoedic	old adult F: D (4)	-13.6	14.2	Late Meso	
Hoedic	old adult M: F1 (5)	-13.7	13.9	Late Meso	
Hoedic	mid adult M: F2 (6)	-13.2	12.4	Late Meso	
Hoedic	young adult F: H (8)	-14.4	12.6	6080±60BP	OxA-6707
Hoedic	young adult F: J1 (7)	-16.5	7.1	Late Meso	
Hoedic	young adult M: K (9)	-14.3	13.3	5755±55BP	OxA-6710
Hoedic	mid adult F: L (10)	-13.9	11.0	Late Meso	
Holmegaard		-11.9		6280±130bp	
Holmegaard		-11.9		6020±100bp	
Huseby Klev		-15.63		c.9100bp	
Kams, Gotland	female	-18.0		8050±75bp	
Kolberg, Germany	rib	-23.3		5880±80BP	OxA-2920
Kunda		-21.1		mid-late Meso	
Lepenski Vir	1 Starcevo: 46-55 M	-19.8	11.1		
Lepenski Vir	8 Starcevo 54-60 F	-20.0	9.4		
Lepenski Vir	9 IIIb 35-55 F	-19.6	11.8		
Lepenski Vir	14 I-II 34-40 F	-18.6	15.1		
Lepenski Vir	18 IIIb 40+ M	-18.4	10.7		
Lepenski Vir	19 III/Starcevo 25-34 F	-18.8	14.8		
Lepenski Vir	23 Ic 30-59 M	-18.1	15.7		
Lepenski Vir	26 I 20-21 M	-20.2	10.0		
Lepenski Vir	28 II 60+ M	-18.8	15.5		
Lepenski Vir	31a IIIb 40-59 M	-18.7	15.7	7770±90BP	OxA-5827
Lepenski Vir	32 IIIb 45-60 F	-19.5	11.9	7270±90BP	OxA-5828
Lepenski Vir	32b IIIb 60+ F	-19.1	12.6		
Lepenski Vir	35 IIIb 30-59 F	-19.7	11.2	6910±90BP	OxA-5829
Lepenski Vir	42b IIIa 50-70 F	-19.0	12.8		
Lepenski Vir	44 IIIb 23-39 M	-18.9	15.3	7590±90BP	OxA-5830
Lepenski Vir	45b I 57-61 M	-18.9	15.7		
Lepenski Vir	47 I-II 44-53 F	-18.3	14.7		
Lepenski Vir	50 I 53-59 M	-18.9	15.0		

Table 2.8 (contd)

Site	Material	13C	15N	Date	Lab No
Lepenski Vir	51 IIIa 35-55 F	-19.1	14.0		
Lepenski Vir	54b Ib 23-59 F	-19.9	11.2		
Lepenski Vir	54c Ib 51-60 F	-19.5	12.4		
Lepenski Vir	54d Ib 34-50 F	-18.0	15.3		
Lepenski Vir	54e Ib 36-42 F	-19.5	13.0		
Lepenski Vir	55a IIIb 45-60 M	-19.0	12.8		
Lepenski Vir	60 Ic 27-31 M	-19.3	14.8		
Lepenski Vir	64 I 51-57 M	-19.6	15.0		
Lepenski Vir	66 IIIb 31-40 M	-19.3	14.9		
Lepenski Vir	69 Proto LV 51-57 M	-19.2	14.8		
Lepenski Vir	83a IIIa 63-75 F	-19.0	12.3		
Lepenski Vir	88 IIIa 35-44 F	-20.2	10.9	7130±90BP	OxA-5831
Lepenski Vir	89a II 30-59 F	-18.5	17.0		
Lepenski Vir	91 I-II 23-39 F	-18.4	15.0		
Lepenski Vir	93 II 43-49 F	-18.5	15.1		
Loona		-18.7			
Malonne, Namur		-19.5		9270±90BP	OxA-5042
Moita do Sebastiao	individual 22	-16.1	12.2	7240±70bp	TO-131
Moita do Sebastiao	individual 24	-16.8	11.9	7180±70bp	TO-132
Moita do Sebastiao	individual 29	-16.9	10.4	7200±70bp	TO-133
Moita do Sebastiao	individual 41	-16.7	11.2	7160±80bp	TO-134
Moita do Sebastiao	individual CT	-15.3	13.4	6810±70bp	TO-135
Moita do Sebastiao		-16.4	+18.8		
Mollegabet II	male	-12.5		4220BC	boat burial
Naa Kamae		-16.0		Late Meso	
Narva		-21.9		Late Meso	
Ogof-yr-Ychen		-14.4		8210±55BP	OxA-7691
Ogof-yr-Ychen		-15.0		8280±55BP	OxA-7690
Ogof-yr-Ychen		-15.9		8415±65BP	OxA-7741
Ogof-yr-Ychen		-15.7			
Ogof-yr-Ychen		-18.3		7020±100BP	OxA-2574
Oleni Ostrov		-20.1		7280±90BP	OxA-2124
Oleni Ostrov		-20.1		7510±90BP	OxA-2125
Oleni Ostrov		-21.7		7350±90BP	OxA-2266
Plau, Germany	cranium	-21.6		5290±90BP	OxA-2917
Pontnewydd Cave	immature	-19.3		7420±90BP	OxA-5819
Pontnewydd Cave	metatarsal	-21.1		4495±70BP	OxA-5820
Potters Cave		-16.1		7880±55BP	OxA-7687
Potters Cave		-17.0		8580±60BP	OxA-7688
Samouquiera, Alentejo		-15.3		6370±70bp	TO-130
Schela Cladovei	M42 45+ F	-19.4	15.4	8415±100BP	OxA-4378
Schela Cladovei	M43 24-35 M	-19.6	16.0	8550±105BP	OxA-4379
Schela Cladovei	M46 40-50 M	-19.2	14.9	8460±110BP	OxA-4380
Schela Cladovei	M47 20s M?	-19.5	15.1		
Schela Cladovei	M48 approx. 30 M	-19.5	15.8	8400±115BP	OxA-4381
Schela Cladovei	M49 35-45 F	-19.6	15.4	8490±110BP	OxA-4382
Schela Cladovei	M50 35-45 M	-19.6	15.6	8290±105BP	OxA-4383
Schela Cladovei	M55 35-45 ?	-20.0	15.0	8510±105BP	OxA-4385
Schellnecker Wand	femur	-20.3		5175±90BP	OxA-3699
Skateholm I	grave 4	-20.1		6240±85bp	
Skateholm I	grave	-24.3		5930±125bp	
Skateholm I	grave 9	-23.7		6220±100bp	
Skateholm I	grave 37	-16.8		6270±70bp	
Skateholm I	grave 26	-25.5		5990±70bp	
Skateholm I	grave 43	-25.1		6180±70bp	
Skateholm II	1932 grave	-18.6		5850±90bp	
Smaland Bight		marine			
Spiginas	grave 3	-22.9		7780±65BP	OxA-5925
Steinhagen, Germany	rib	-22.5		6550±90BP	OxA-2921
Teviec	young adult F: B (2)	-17.0		5680±50BP	OxA-6662
Teviec	mid adult F: D1 (1)	-15.6	9.4		
Teviec	mid adult M: E1 (11)	-14.7	12.9		
Teviec	child 2.5 years: E2 (12)	-14.7	12.9		
Teviec	young adult F: H1 (14)	-16.6	6.8	6000±60BP	OxA-6701
Teviec	child 3.5 years: H2 (17)	-14.1	15.3		
Teviec	mid adult M: K1 (8)	-15.6		6440±55BP	OxA-6663

Table 2.8 (contd)

Site	Material	13C	15N	Date	Lab No
Teviec	young adult F: H3 (15)	-16.6	11.7	6530±60BP	OxA-6702
Teviec	young/mid adult M: K2 (7)	-14.6	10.8		
Teviec	young/mid adult F: K3 (9)	-14.9	12.8		
Teviec	14-16 years: K4 (10)	-16.0		6510±50BP	OxA-6664
Teviec	young adult M: K6 (16)	-15.4	13.4		
Teviec	child 1-2 months: L (20)	-14.6	15.2		
Teviec	young adult M: M (13)	-15.2		6740±60BP	OxA-6665
Tybrind Vig		-18.6			
Tybrind Vig	female	-15.7			
Unseburg, Germany	rib	-21.1		7670±90BP	OxA-2918
Vaenge So	male	-11.2		5550±70bp	
Vaenge So	female	-11.1		5540±65bp	
Vedbaek		-13.4 to -15.3			
VedbaekBogebakken		marine			
Viste		-17.1		7420±150bp	
Vlasac	2 III B 34-43 F	-18.9	13.9		
Vlasac	14 III B 25-34 M	-19.4	15.9		
Vlasac	15 III B 50-59 F	-18.6	15.9		
Vlasac	22 III B 23+ M	-18.6	14.8		
Vlasac	23 III B 30-60 M	-18.8	14.7		
Vlasac	24 III B 30-60 M	-18.2	14.7	8000±100BP	OxA-5826
Vlasac	25 II A 53-59 M	-18.7	15.2		
Vlasac	27 II A 51-57 M	-18.4	14.9		
Vlasac	28 II A 28-34 F	-19.0	13.8		
Vlasac	29 I B 26-30 F	-18.8	15.4		
Vlasac	31 I A 7-19 M	-18.5	14.9		
Vlasac	32 I A 37-43 F	-19.5	14.0		
Vlasac	37 I B 30-60 M	-19.1	14.4		
Vlasac	40 III B 40-80 F	-19.5	14.8		
Vlasac	44 II B 52-58 M	-19.1	13.5		
Vlasac	45 II ? 34-43 M	-19.1	15.4		
Vlasac	49 I A 30-60 F	-19.2	14.8		
Vlasac	50 I B 30-60 M	-19.0	15.4		
Vlasac	50a I B 55-63 M	-19.4	14.8		
Vlasac	50b I B 34-43 M	-19.0	14.6		
Vlasac	51a I A 35-51 F	-19.1	14.4	8760±110BP	OxA-5822
Vlasac	52 I A 33-39 F	-19.1	14.9		
Vlasac	54 I A 30-60 M	-19.1	14.9	8170±100BP	OxA-5823
Vlasac	56 I B 32-45 M	-18.5	15.6		
Vlasac	57 II B 40-70 F	-19.3	13.9		
Vlasac	60 I B 42-46 M	-18.8	15.3		
Vlasac	72 I A 35-55 F	-19.3	14.5	10240±120BP	OxA-5824
Vlasac	79 II B 24-34 M	-18.7	15.1		
Vlasac	83 III B 40-80 F	-19.1	14.6	8200±90BP	OxA-5827
Worms Head Cave, Gower		-18.8		8800±80BP	OxA-4024
Zvejnieki	grave 305	-21.59		8240±70BP	Ua-3634
Zvejnieki	grave 39	-23.01		6775±55BP	Ua-3635
Zvejnieki	grave 57	-22.97		6825±60BP	Ua-3636
Zvejnieki	grave 85	-23.17		6460±60BP	Ua-3637
Zvejnieki	grave 2	-20.07		6900±65BP	Ua-3638
Zvejnieki	grave 124	-23.03		5280±55BP	Ua-3639
Zvejnieki	grave 142	-21.63		2370±65BP	Ua-3640
Zvejnieki	grave 185	-23.03		5230±65BP	Ua-3641
Zvejnieki	grave 300	-22.81		5690±45BP	Ua-3642
Zvejnieki	grave 206	-23.47		5285±50BP	Ua-3643
Zvejnieki	grave 154	-23.33		7730±70BP	Ua-3644
Zvejnieki	grave 282	-22.53		5100±65BP	Ua-3645

Refs: Noe-Nygaard 1983; Meiklejohn 1986; Price 1989; Hedges *et al.* 1990; Straus 1991; Hedges *et al.* 1992; Lubell *et al.* 1992; Hedges *et al.* 1995b; Clutton-Brock & Noe Nygaard 1990; Rowley-Conwy 1995; Wigforss 1995; Aldhouse-Green 1996; Lougas 1996; Bonsall *et al.* 1997; Hedges *et al.* 1998; Richards & Mellars 1998; Hedges *et al.* 2000a, b, Lynch *et al.* 2000, Schulting & Richards 2001

Table 2.9 Stable isotope values of Mesolithic dogs

Site	Material	^{13}C	Date	Lab No
Bloksbjerg	dog	marine	mid-late Meso	
Carstenminde	dog	marine	mid-late Meso	
Dammen	dog	-13.23	8065±85bp	
Ertebolle	dog	marine	mid-late Meso	
Kassemosse	dog	terrestrial	mid-late Meso	
Kongemose	dog	-14.00	mid-late Meso	
Kongemose	dog	-16.97	mid-late Meso	
Maglemosegårds Vaenge	dog	marine	mid-late Meso	
Olby Lyng	dog	terrestrial	mid-late Meso	
Praestelyngen	dog	-21.6	3310±65bc	
Ringkloster	dog	-11.8	Late Meso	K-387
Ringkloster	dog	-20.0	Late Meso	K-386
Ringkloster	dog	-21.3	5230±70bp	K-4132
Ringkloster	dog	-18.0	5420±210bp	K-4133
Seamer Carr	dog	-14.67	Early Meso	
Seamer Carr	dog	-16.97	Early Meso	
Solager	dog	marine	mid-late Meso	
Vedbaek	dog	-14.7		
Vedbaek	dog	-14.7		

Refs: Noe-Nygaard 1983; Meiklejohn 1986; Price 1989; Hedges et al. 1990; Straus 1991; Hedges et al. 1992; Lubell et al. 1992; Hedges et al. 1995b; Clutton-Brock & Noe Nygaard 1990; Rowley-Conwy 1995; Wigforss 1995; Aldhouse-Green 1996; Loughs 1996; Bonsall et al. 1997; Hedges et al. 1998; Richards & Mellars 1998; Hedges et al. 2000a, b, Lynch et al. 2000, Schulting & Richards 2001

Table 2.10 - Stable isotope values of modern and archaeological groups with known diet

Table 2.10a - Stable isotope values of modern and archaeological groups

Group	Dietary Staples	δ13C	δ15N
Modern Northern Europe	C3 consumers	-19.6±1.6	
Ottawa Valley	C3 plants & freshwater fish	-19.6±0.9	
Greenland Inuit	Marine resources	-12.8	
Greenland Inuit	Marine resources	-12.0 to -13.0	
British Columbia	C3 plants & freshwater/anadromous fish	-15.4±0.3	
British Columbia	Marine resources	-13.4±0.9	
Dutch whalers of 17/18th century	Mixed diet	-19.2	12
Americas	Maize & marine consumers	-8.0	14.4
Alaskan Eskimo	Marine resources (up to 85%)	-12 to -14.5	17 to 20
Huriah agriculturalists	C3 plants		6 to 12
Mugu	Marine resources		16
Australian aborigines	Marine resources	-12.0	
Australian aborigines	C3 plants	-21.4	
British Columbia	Marine diet	-13.0±0.9	
British Columbia	Terrestrial C3 diet	-20.0±0.9	
Namu - dog	Marine resources & anadromous fish	-12.2 to -14.4	14.8 to 17.2
Jomon	Terrestrial C3 diet	-26.0 to -21.0	2.0 to 9.0
Jomon	Aquatic resources	-20.0 to -15.5	11.5 to 16.0

Table 2.10b - Expected mean values of humans consuming monotonous diets

Expected Mean Values	Dietary Staples	δ13C	δ15N
Human - Expected mean*	C3 plant consumers (average)	-21.4	
Human - Expected mean^	C3 terrestrial herbivores	-20.0	8
Human - Expected mean^	Freshwater fish	-19.0	14
Human - Expected mean^	Marine fish	-12.0	16

* - Merwe et al 1981

^ - Bonsall et al 2000

data from Merwe et al. 1981; Tauber 1981;Chisholm et al 1982, 1983; Schoeninger et al 1983; Hobson & Collier 1984; Sealy 1986; Schoeninger 1989; Katzenberg 1993; Richards & Hedges 1999; Bonsall et al 2000

Table 2.11 - Stable Isotope Values of Resources

Table 2.11a - Stable Isotope Values of Fish

Source	Resource	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	Date	Material
Fish					
Lake Baikal	grayling	-15.2	10.1	modern	
Lake Baikal	ide	-12.9	9.4	modern	
Lake Baikal	lenok	-14.2	11.1	modern	
Lake Baikal	pike	-22.0	12.0	modern	
Lake Baikal	Baikal grayling	-20.4	13.7	modern	
Lake Baikal	Crucian Carp	-21.4	7.3	modern	
Lake Baikal	perch	-21.0	11.9	modern	
Lake Baikal	omul	-24.6	11.5	modern	
Lake Geneva	whitefish	-22.6±0.3	12.3±0.1	modern	
Lake Geneva	Arctic char	-22.8±0.1	13.2±0.5	modern	
Uncertain	fish - piscivores	-12.8±1.6	12.8±2.1	modern	bone collagen
South Africa & Georges Bank	fish - piscivores	-17.2±0.5	14.5±2.8	modern	flesh
Equador	fish- ominvores	-13.2±1.2	13.4±0.9	modern	bone collagen
Georges Bank	fish- ominvores	-16.7±1.9	12.6±1.9	modern	flesh
British Columbia & Georges Bank	fish- planktivorous	-19.3±1.9	11.5±1.9	modern	flesh
North America	freshwater fish	-28.8±1.5		modern	
North America	marine fish	-17.5±1.5		modern	
Lepenski Vir	fish	-26.3	8.1	Mesolithic	bone collagen
Lepenski Vir	fish	-15.7	12.9	Mesolithic	bone collagen
Lepenski Vir	fish	-19.8	10.7	Mesolithic	bone collagen

data from Chisholm et al. 1982, Katzenburg 1993, Bonsall et al 1997, Dufour et al 1999, Katzenberg & Weber 1999, Richards et al. 2001

Table 2.11b - Stable Isotope Values of Other Aquatic Resources

Source	Resource	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	Date	Material
Other Aquatic resources					
Georges Bank, Equador & South Africa	crustaceans	-15.7±2.0	10.7±2.3	modern	flesh
Georges Bank, Equador & South Africa	shellfish	-15.9±2.0	8.8±1.3	modern	flesh
California & Peru	sealion	-12.7±0.8	18.0±1.5	mixed^	bone collagen
California, North West Europe	seal	-12.3±1.3	17.0±2.1	modern	bone collagen
California & Alaska	whale*	-12.9±1.1	16.5±0.8	mixed^	bone collagen
California	dolphin/porpoise	-12.8±1.0	15.7±0.9	modern	bone collagen
South Africa, Alaska & California	whale**	-14.5±1.4	13.7±1.3	modern	bone collagen
Equador & Georges Bank	cephalopods	-16.7±0.4	12.6±2.3	modern	flesh
Alaska & North West Europe	walrus	-13.9±0.3	12.3±0.2	modern	bone collagen
Baikal Region	seal	-22.0	14.0	prehistoric	bone collagen
North America	marine mammals	-17.5±0.9		modern	
Lepenski Vir	otter	-19.2	10.5	Mesolithic	bone collagen
England	crane	-20.1	8.7	Mesolithic	bone collagen

data from Chisholm et al. 1982, Katzenburg 1993, Bonsall et al 1997, Dufour et al 1999, Katzenberg & Weber 1999, Richards et al. 2001

whale* - invertebrate consumers

whale** - piscivorous

mixed^ - both modern & prehistoric samples

Table 2.11 c - Stable Isotope Values of Terrestrial Resources

Source	Resource	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	Date	Material
Terrestrial Resources					
Schela Cladovei	bovid	-21.0	4.8	Meso/Neo	bone collagen
Schela Cladovei	bovid	-21.0	5.0	Meso/Neo	bone collagen
Schela Cladovei	bovid	-20.8	5.6	Meso/Neo	bone collagen
Schela Cladovei	bovid	-20.3	5.3	Meso/Neo	bone collagen
Schela Cladovei	bovid	-20.9	6.9	Meso/Neo	bone collagen
Schela Cladovei	bovid	-21.1	4.5	Meso/Neo	bone collagen
Schela Cladovei	bovid	-20.9	5.3	Meso/Neo	bone collagen
Lepenski Vir	bovid	-20.6	7.7	Meso/Neo	bone collagen
Lepenski Vir	bovid	-21.8	5.5	Meso/Neo	bone collagen
Lepenski Vir	bovid	-21.5	5.2	Meso/Neo	bone collagen
Seamer Carr	deer	-22.65		Mesolithic	bone collagen
Baikal Region	deer	-19.0	5.0	prehistoric	bone collagen
Baikal Region	elk	-19.3	4.1	prehistoric	bone collagen
Unspecified	beef fat	-30.0		modern	fat
Unspecified	lamb fat	-33.0		modern	fat
North America	deer	-18.2	9.1	modern	flesh

data from Clutton-Brock & Noe Nygaard 1990, Bonsall et al 1997, Katzenberg & Weber 1999

Table 2.11d - Latin names of species detailed in Tables 2.11a-c

Common Name	Latin Name
Arctic char	<i>Salvenius alpinus</i>
Baikal grayling	<i>Thymallus arcticus baicalensis</i>
crane	<i>Grus grus</i>
Crucian Carp	<i>Carassius carassius</i>
deer	<i>Cervus</i> spp.
dolphin/porpoise	Delphinidae/Phocoenoides
elk	<i>Alces alces</i>
grayling	<i>Thymallus articus</i>
ide	<i>Leuciscus idus</i>
lenok	<i>Branchinstax lenok</i>
Omul	<i>Coregonus autumnalis migratorius</i>
otter	<i>Lutra lutra</i>
perch	<i>Perca fluviatilis</i>
pike	<i>Esox lucius</i>
seal	Phocidae
sealion	<i>Zalophus californianus</i>
walrus	<i>Odobenus rosmarus</i>
whale	<i>Cetus</i> spp.
whitefish	<i>Coregonus lavaretus</i>

Table 2.12 - Range of Aquatic Resources
Exploited in Mesolithic Europe

Table 2.12a - Aquatic birds

SITE	Aquatic Birds	Atlantic Puffin	Auk	Barnacle Goose	Bean Goose	Bean Goose/Grey Lag Goose	Bittern	Black Guillemot	Black Headed Gull	Black Stork	Black Throated Diver	Black-Backed Gull	Black-Backed/Herring Gull	Brent Goose	Brunnich's Guillemot	Brunnichs/Guillemot	Common Gull	Common Scoter	Common Tern/Arctic Tern	Coot	Cormorant
Advik-House F		2	8					1				1									
Advik-House B NW Midden		1																			
Advik House F-Test pit		6																			
Advik-House J-N E Midden		2																			
Agerod I:HC					1																
Agerod Complex																					
Aggersund																					
Angsnes																					
Araguina-Sennola	U																				
Argus										U											
Arlov I					2																
Balltorp	U																				U
Birsmatten																					
Bjornsholm				1							2										
Bredasten																					
Bua Vastergard												3						1			1
Casteal nan Gilleann I																					
Cnoc Sligeach																					U
Dalkey Island II		U																			
Dalkey Island V																					
Dammen	U																	U			
Ertebolle																					
Fiskerhuset 6																					
Frebergsvik			U																		
Friesack	U																				
Gressbakken		101						27				61	2		54	1455	8	3			1
Gronehelleren																					U
Gropbakkeengen		3						2													
Hallebygaard																					
Havelse																					
Havno																					
Henauhof Nordwest Stratum 5																					
Henauhof Nordwest Stratum 4																				4	1
Henauhof Nordwest Stratum 3																				3	
Hoedic																					
Hohen Viecheln					U															U	U
Holmegaard 1										U										U	U

Table 2.12a (contd)

SITE	Aquatic Birds	Atlantic Puffin	Auk	Barnacle Goose	Bean Goose	Bean Goose/Grey Lag Goose	Bittern	Black Guillemot	Black Headed Gull	Black Stork	Black Throated Diver	Black-Backed Gull	Black-Backed/Herring Gull	Brent Goose	Brunnich's Guillemot	Brunnich's Guillemot	Common Gull	Common Scoter	Common Tern/Arctic Tern	Coot	Cormorant
Hoybukt Sydost																					
Huseby Klev																					
Inzigkofen																					
Jagersshohle																					
Kildegaard																					
Klinteso																					
Konnu																					
Kopu I																					1
Kunda	204																				
Loddesborg																					
Lough Boora																					
Meilgaard																					
Molara Cave	U																				
Mollegabet I																					U
Mollegabet II																					
Morton B		U																			U
Mount Sandel																					
Narva	112																				
Norsminde																					
Nyelv Nedre Vest		109	2	2	1			1	1			6		2	31		2				3
Ogaard																					
Olby Lyng																					
Olmanas																					
Orelunds Mose																					
Padina I											1										1
Pobiel 10																					
Ringkloster																					
Rockmarshall																					
Rottjarnslid		1									4	2					1				23
Saarijarvi																					
Segebro					1						3	1					2				
Siltapellonhaka II																					
Skateholm I					P					P	P										
Skateholm II					2						P							1			
Solager																	14				
Star Carr																					
Svaerdborg I						1			3		1									8	
Svaerdborg II																					
Teviec		U													U	U					U
Thatcham																					
Torkop		1	6					2													
Tybrind Vig																					
Uzzo Cave	U																				
Vaenge So																					U
Vedbaek Henriksholm Bogebakken																					U
Verup Mose						1															2
Vinde Helsing Mose																					1
Viste																					
Vlasac																					3
Zvidze					U																

Table 2.12a (contd)

SITE	Crane	Curlew	Dalmatian Pelican	Diver	Duck	Eider	Eider/King Eider	Ferruginous Duck	Fulmar	Gannet	Goldeneye	Goosander	Goose	Great Auk	Great Crested Grebe	Great White Egret	Grebe	Green-Winged Teal	Grey Heron	Greylag Goose	Guillemot	Gull
Advik-House F						7								4							42	
Advik-House B NW Midden																					30	
Advik House F-Test pit						2															7	
Advik-House J-N E Midden						8															14	
Agerod I:HC															1							
Agerod Complex											P											
Aggersund																						
Angsnes						2		1														
Araguina-Sennola																						
Argus	U																					
Arlov I											1										1	
Balltorp																					U	
Birsmatten																						
Bjornsholm		1			6					3												
Bredasten																						
Bua Vastergard																						
Casteal nan Gilleaen I														2								
Cnoc Sligeach										U			U									U
Dalkey Island II																					U	
Dalkey Island V					U																	
Dammen													U									
Ertebolle					U								1									U
Fiskerhuset 6																						
Frebergsvik																						
Friesack																						
Gressbakken						66	30	90			1		18								50	
Gronehelleren													U									
Gropbakkeengen								3													8	
Hallebygaard																						
Havelse													1									
Havno													2									
Henauhof Northwest Stratum 5																						
Henauhof Northwest Stratum 4											1	1										
Henauhof Northwest Stratum 3																			1			
Hoedic																						
Hohen Viecheln	U											U			U					U		
Holmegaard 1	U														U							

Table 2.12a (contd)

SITE	Crane	Curlew	Dalmatian Pelican	Diver	Duck	Eider	Ferruginous Duck	Fulmar	Gannet	Goldeneye	Goosander	Goose	Great Auk	Great Crested Grebe	Great White Egret	Grebe	Green-Winged Teal	Grey Heron	Greylag Goose	Guillemot	Gull
Hoybukt Sydost						9														8	
Huseby Klev													U								
Inzigkofen																					
Jagersshohle											1										
Kildegaard																					
Klinteso													U								
Konnu											1										
Kopu I						2				2											
Kunda																					
Loddesborg											1									1	
Lough Boora					U																
Meilgaard													5								
Molara Cave																					
Mollegabet I				U	U																
Mollegabet II					U																
Morton B								U	U											U	
Mount Sandel					19																
Narva																					
Norsminde					U																
Nyelv Nedre Vest				2	2	132		62	3				47							176	7
Ogaarde	1													5							
Olby Lyng													U								
Olmanas													1								
Orelunds Mose																					
Padina I																			1		
Pobiel 10					U																
Ringkloster																					
Rockmarshall																					
Rottjarnslid										1			23	1						12	
Saarijarvi																					
Segebro	1					2				4	12										1
Siltapellonhaka II					1																
Skateholm I			P			P			P	P	P									P	
Skateholm II										4	1										P
Solager					U	57				92											
Star Carr	U															U					
Svaerdborg I	11				49						1	2				9					
Svaerdborg II											U										
Teviec					U								1								
Thatcham	1																				
Torkop													2								
Tybrind Vig					U																
Uzzo Cave																					
Vaenge So																					
Vedbaek Henriksholm Bogebakken						U															
Verup Mose																					
Vinde Helsing Mose														4							
Viste				U	U	U							U			U				U	U
Vlasac															2		1				
Zvidze							U														

Table 2.12a (contd)

SITE	Heron	Herring Gull	King Elder	Kittiwake Gull	Lesser Black-Backed Gull	Little Stint	Long Tailed Duck	Mallard	Manx Shearwater	Merganser	Mute Swan	Osprey	Pelican	Pink-Footed Goose	Pintail	Pochard	Razorbill	Razorbill/Gullinot	Red Breasted Merganser	Red Necked Grebe	Red Throated Diver	Red/Black Throated Diver
Advik-House F																						
Advik-House B NW Midden																						
Advik House F-Test pit																						
Advik-House J-N E Midden																						
Agerod I:HC																			1	1		
Agerod Complex								2?							P							
Aggersund																						
Angsnes																		3				
Araguina-Sennola																						
Argus								U		U												
Arlov I	4							2			1											
Balltorp																	U					
Birsmatten								U											U			
Bjornsholm																				1		
Bredasten																						
Bua Vastergard							1															
Casteal nan Gilleann I																						
Cnoc Sligeach																	U					
Dalkey Island II																						
Dalkey Island V																						
Dammen																						
Ertebolle																				U	U	
Fiskerhuset 6																	U					
Frebergsvik																						
Friesack																						
Gressbakken		1	16	14	10		2							1			21	1051	2			
Gronehelleren																						
Gropbakkeengen		1																				
Hallebygaard								1														
Havelse																						
Havno													U									
Henauhof Nordwest Stratum 5											1											
Henauhof Nordwest Stratum 4																						
Henauhof Nordwest Stratum 3																	3					
Hoedic																						
Hohen Viecheln								U							U				U			
Holmegaard 1																						

Table 2.12a (contd)

SITE	Heron	Herring Gull	King Eider	Kittiwake Gull	Lesser Black-Backed Gull	Little Stint	Long Tailed Duck	Mallard	Manx Shearwater	Merganser	Mute Swan	Osprey	Pelican	Pink-Footed Goose	Pintail	Pochard	Razorbill	Razorbill/Guillemot	Red Breasted Merganser	Red Necked Grebe	Red Throated Diver	Red/Black Throated Diver
Hoybukt Sydost																						
Huseby Klev																						
Inzigkofen								7														
Jagershohle																						
Kildegaard																						
Klinteso																						
Konnu							U												1			
Kopu I							2			U									1			
Kunda																						
Loddesborg																						1
Lough Boora																						
Meilgaard																						
Molara Cave																						
Mollegabet I		U								U		U										
Mollegabet II																						
Morton B				U													U					
Mount Sandel																					3	
Narva																						
Norsminde																		U				
Nyelv Nedre Vest		3	7	1	1	2	1										54	512				
Ogaarde								8														
Olby Lyng																						
Olmanas																						
Orelunds Mose																						
Padina I											1											
Pobiel 10																						
Ringkloster																					U	
Rockmarshall																						
Rottjarnslid				4			10		1								6				1	
Saarijarvi																					4	
Segebro	1						3	23		3									2		2	
Siltapellonhaka II																						
Skateholm I							P	P					U				P		P			
Skateholm II							2												4		1	
Solager																						
Star Carr															U						U	
Svaerdborg I	U						62				2											
Svaerdborg II							U												U			
Teviec				U			U										U					
Thatcham							4															
Torkop																	1					
Tybrind Vig																						
Uzzo Cave																						
Vaenge So																						
Vedbaek Henriksholm Bogebakken																						U
Verup Mose								1														
Vinde Helsing Mose																						
Viste																						
Vlasac								2														
Zvidze								U		U					U							

Table 2.12a (contd)

	Wigeon	Whooper Swan	White-Tailed Eagle	White Stork	White Pelican	White Fronted Goose	Velvet Scoter	Tufted Duck	Teal	Swan	Stork	Snipe	Sniew	Shoveler	Shelduck	Shag	Sea Birds	Scoter	Scaup	Sandpiper	Reed Bunting
SITE																					
Advik-House F																					
Advik-House B NW Midden						3															
Advik House F-Test pit			1																		
Advik-House J-N E Midden																					
Agerod I:HC										1				1							
Agerod Complex						P		P	5?										P	1	
Aggersund																					U
Angsnes																					
Araguina-Sennola																U					
Argus															U						
Arlov I																					
Balltorp																					
Birsmatten																					
Bjornsholm																				1	
Bredasten																					
Bua Vastergard																					
Casteal nan Gilleann I																					
Cnoc Sligeach																					
Dalkey Island II																U					
Dalkey Island V																					
Dammen																					
Ertebolle											U										
Fiskerhuset 6																					U
Frebergsvik																					
Friesack																					
Gressbakken								5													1
Gronehelleren											U										
Gropbakkeengen																					1
Hallebygaard																					1
Havelse																					
Havno																					U
Henauhof Northwest Stratum 5								1													
Henauhof Northwest Stratum 4								1	3												
Henauhof Northwest Stratum 3								1													
Hoedic																					U
Hohen Viecheln							U														U
Holmegaard 1														U							U

Table 2.12a (contd)

SITE	Reed Bunting	Sandpiper	Scaup	Scoter	Sea Birds	Shag	Shelduck	Shoveler	Smew	Snipe	Stork	Swan	Teal	Tufted Duck	Velvet Scoter	White Fronted Goose	White Pelican	White Stork	White-Tailed Eagle	Whooper Swan	Wigeon
Hoybukt Sydost																					
Huseby Klev																					
Inzigkofen													3								
Jagersshohle																					
Kildegaard																			1		
Klintereso																				U	
Konnu																					
Kopu I																			1		
Kunda																					
Loddesborg																					
Lough Boora																					
Meilgaard																				U	
Molara Cave																					
Mollegabet I												U							U		
Mollegabet II												U									
Morton B						U															
Mount Sandel																					
Narva																					
Norsminde												U									
Nyelv Nedre Vest										1			2							2	
Ogaard									1			4							97		
Olby Lyng																					
Olmanas																					
Orelunds Mose												2									
Padina I																					
Pobiel 10																					
Ringkloster												U							U		
Rockmarshall					U																
Rottjarnslid																				2	
Saarijarvi																					
Segebro						1						5		3	2					1	
Siltapellonhaka II																					
Skateholm I			P									P			P						
Skateholm II			P									2	2	2							
Solager					U										82					29	
Star Carr																		U			
Svaerdborg I												7	2						14		
Svaerdborg II																					
Teviec									U		U		U								U
Thatcham									1												
Torkop																					
Tybrind Vig												U									
Uzzo Cave																					
Vaenge So																					
Vedbaek Henriksholm Bogebakken												1									
Verup Mose																				1	
Vinde Helsing Mose																					
Viste				U								U									
Vlasac													2				3		27		
Zvidze													U								U

Table 2.12b - Sea Mammals

SITE	Bearded Seal	Bottle Nosed Dolphin	Bottlenose Whale	Cetacean	Common dolphin	Common porpoise	Common Seal	Dolphin sp	Greenland Seal	Grey seal	Killer Whale	Monk Seal
Aamolle										U		
Advik-House F	1						62		94			
Advik-House B NW Midden							11		130	1		
Advik House F-Test pit				2			2					
Advik-House J-N E Midden							12		2			
Aero												
Agerod I:HC										5		
Alavus-Rautalanvainio							3					
Alby										U		
Altrasket												
Angsnes							9		331			
Araguina-Sennola												1
Argus									U	U		
Arlov I						1				8		
Askola							9					
Asted Enge												
Balltorp												
Bardal			1									
Bjornsholm						1				2		
Blair Drummond												
Blegkilde										U		
Bloksbjerg							U		U	U		
Brabrand												
Bredasten							P			P		
Bua Vastergard							3			14		
Casteal nan Gilleaen I							U			U		
Casteal nan Gilleaen II										22		
Causewayhead												
Cnoc Coig				9			3			360		
Cnoc Sligeach				U			U			28		
Curran Point												
Dalkey Island II								U		U		
Dalkey Island V										U		
Dammen						U						
Dyrholm		6			6				1			
Dunmore												
Ellerbek												
Erslev Kaer												
Ertebolle										U	1	
Fannerup										U		

Table 2.12b (contd)

SITE	Bearded Seal	Bottle Nosed Dolphin	Cetacean	Common dolphin	Common porpoise	Common Seal	Dolphin sp	Greenland Seal	Grey seal	Killer Whale	Monk Seal
Fat'ma-Korba											
Fiskerhuset 2											
Fiskerhuset 6											
Fiskerhuset 92									1		
Forth Valley											
Frebergsvik											
Gamborg Fjord					U						
Gislause						?			U		
Godsted						U					
Gressbakken	23	2	18			85		279	1	2	
Gronehelleren											
Gropbakkeengen								2			
Gudso Vig											
Gudumland									U		
Havelse									1		
Havno									U		
Heden											
Helgenaeo											
Hoedic											
Honkajoki						13					
Hopeapelto											
Hoybukt Sydost						5		70			
Huseby Klev					U		U		U		
Jaegerspris									U		
Kervara						36					
Kildegaard				4							
Koldingfjord									U		
Kolind									U		
Konnu									MNI 5		
Kopu I						54			45		
Kopu IV						17					
Kopu VIII						9					
Kotedalen											
Kourtane						1					
Kunda											
Lango											
Limhamn									1		
Loddesborg					5				5		
Loona											
Lundfors A											
Lundfors B											
Meiklewood											
Meilgaard									U		
Molara Cave			U								
Mollegabet I					U						
Mollegabet II					U						

Table 2.12b (contd)

SITE	Bearded Seal	Bottle Nosed Dolphin	Bottlenose Whale	Cetacean	Common dolphin	Common porpoise	Common Seal	Dolphin sp	Greenland Seal	Grey seal	Killer Whale	Monk Seal
Naa Karmæ												
Narpes												
Narva												
Nekselo										U		
Nivaa						1						
Nivagaard										U		
Norrkopping												
Norsminde										U		
Nyelv Nedre Vest				1			47		20	4		
Ogaarde										2		
Olby Lyng												
Olmanas										1		
Pernau												
Porvoo							13					
Priory Midden										11		
Rahkaissuo							1					
Ringkloster		1										
Risga							U			U		
Rockmarshall												
Ronaes Skov						U						
Rottjarnslid										3		
S Kotopelto												
Sanda												
Saunapelto-Perunamaa												
Segebro						34	4			106		
Sejro										U		
Siltapellonhaka							1					
Siltapellonhaka II							1					
Siretorp										U		
Skateholm I						1				131		
Skateholm II						2				102		
Skipshelleren							U					
Solager										U		
Stirling-Cow-Park												
Stora Forvar-Stora Karlso										U		
Strandegaard												
Svaerdborg I										1		
T Ruoksmåa												
Tallikaaro												
Teviec												
Tjikkitrask							2					
Toppinen												
Tybrind Vig												
Uzzo Cave				U								
Vaenge So												
Vasterbjers												
Vedbaek Henriksholm Bogebakken										U		
Vedbaek Vaenget Nord										U		
Vinde Helsing Mose												
Virksund												
Viste						1	U			U		
West Carse												

Table 2.12b (contd)

SITE	Porpoise sp	Ringed seal	Rorqual	Seal sp	Sperm Whale	Walrus	Whale sp.	White Beaked Dolphin	White Whale
Aamolle									
Advik-House F				437					
Advik-House B NW Midden				15					
Advik House F-Test pit				77					
Advik-House J-N E Midden				8					
Aero				U					
Agerod I:HC				U					
Alavus-Rautalanvainio									
Alby									
Altrasket		U							
Angsnes				39				102	
Araguina-Sennola									
Argus									
Arlov I		1							
Askola									
Asted Enge							MNI 1		
Balltorp				U					
Bardal									
Bjornsholm									
Blair Drummond							U		
Blegkilde									
Bloksbjerg									
Brabrand								1	
Bredasten									
Bua Vastergard				U					
Casteal nan Gillea I							U		
Casteal nan Gillea II			3?						
Causewayhead							U		
Cnoc Coig									
Cnoc Sligeach									
Curran Point							U		
Dalkey Island II									
Dalkey Island V									
Dammen									
Dyrholm	3								
Dunmore							U		
Ellerbek				U					
Erslev Kaer							MNI 1		
Ertebolle	1	U							
Fannerup	1								

Table 2.12b (contd)

SITE	Porpoise sp	Ringed seal	Rorqual	Seal sp	Sperm Whale	Walrus	Whale sp.	White Beaked Dolphin	White Whale
Fat'ma-Korba				1					
Fiskerhuset 2		1							
Fiskerhuset 6				3					
Fiskerhuset 92				1					
Forth Valley							U		
Frebergsvik	U			6			85	U	
Gamborg Fjord									
Gislause		?							
Godsted									
Gressbakken				10517	3	3	4244	112	
Gronehelleren				35%					
Gropbakkeengen				9		1			
Gudso Vig							1		
Gudumland									
Havelse									
Havno									
Heden		200							
Helgenaeo				U					
Hoedic							U		
Honkajoki									
Hopeapelto				3					
Hoybukt Sydost				54					
Huseby Klev							U	1	
Jaegerspris									
Kervara									
Kildegaard									
Koldingfjord							1		
Kolind	1								
Konnu		MNI 20		143					
Kopu I		U		433					
Kopu IV		U		2					
Kopu VIII				2					
Kotedalen									
Kourtane									
Kunda		U		73					
Lango							1		
Limhamn									
Loddesborg									
Loona				U					
Lundfors A		237							
Lundfors B		97							
Meiklewood							U		
Meilgaard		1							1
Molara Cave									
Mollegabet I	U			U			1		
Mollegabet II				U					

Table 2.12b (contd)

SITE	Porpoise sp	Ringed seal	Rorqual	Seal sp	Sperm Whale	Walrus	Whale sp.	White Beaked Dolphin	White Whale
Naa Karmae				U					
Narpes									
Narva				20					
Nekselo									
Nivaa									
Nivagaard									
Norrkopping		1							
Norsminde				U			U		
Nyelv Nedre Vest				462					
Ogaarde				U					
Olby Lyng	1.70%			10.60%					
Olmanas									
Pernau									
Porvoo									
Priory Midden			1?				2		
Rahkaissuo				8					
Ringkloster									
Risga									
Rockmarshall	U?			U					
Ronaes Skov									
Rottjarnslid									
S Kotopelto				1					
Sanda				U					
Saunapelto-Perunamaa				3					
Segebro		4							
Sejro									
Siltapellonhaka				18					
Siltapellonhaka II				10					
Siretorp		U							
Skateholm I		5							
Skateholm II		1							
Skipshelleren									
Solager									
Stirling-Cow-Park							U		
Stora Forvar-Stora Karlso		U							
Strandegaard				U					
Svaerdborg I				U					
T Ruoksmaa				8					
Tallikaaro				41					
Teviec				U			U		
Tjikkitrask									
Toppinen				6					
Tybrind Vig	U			U			U		
Uzzo Cave									
Vaenge So							U		
Vasterbjers				U					
Vedbaek Henriksholm Bogebacken	U			U					
Vedbaek Vaenget Nord									
Vinde Helsing Mose									
Virksund		1							
Viste				10%					
West Carse							U		

Table 2.12c - Other Aquatic Resources

SITE	Beaver	Crab	Fen Turtle	Frog	Greek Tortoise	Marsh Woundwort	Otter	Pond Terrapin	Pond Tortoise	Sea Urchin	Toads	Water Vole	Water Sedge	Yellow Water Lily
Abri du Pape				2										
Advik-House F	4						1							
Advik-House B NW Midden	1													
Agerod I:HC	45						1		5					
Agerod Complex	16						5					23		
Angsnes	2													
Argus	U						U							
Arlov I	6											1		
Baile Herculane	U													
Balltorp	U													
Birsmatten	U						U							
Bjornsholm				1			3				6			
Bredasten	P						P							
Bua Vastergard	2													
Casteal nan Gillea I							U							
Casteal nan Gillea II							13							
Clonava						P							P	P
Cnoc Coig		U					123							
Cnoc Sligeach							12							
Cuina Turcului I	72													
Cuina Turcului II	52								U					
Dammen							U							
Dudka I	1								1					
Dudka II	15													
Ertebolle							U							
Falkensteinhöhle	28						29							
Felsstalle	U													
Frebergsvik							2							
Friesack	U								U					
Gressbakken	72						1							
Gronehelleren							U							
Gropbakkeengen	1													
Haiti-Myllypleto	1													
Hallebygaard	3													
Heden	6													
Helga Abri	U													

Table 2.12c (contd)

SITE	Beaver	Crab	Fen Turtle	Frog	Greek Tortoise	Marsh Woundwort	Otter	Pond Terrapin	Pond Tortoise	Sea Urchin	Toads	Water Vole	Water Sedge	Yellow Water Lily
Henauhof Northwest Stratum 3	4													
Henauhof Northwest II	2													
Hesselbjergaard	2													
Holmegaard 1	U						U		U					
Honkajoki	20													
Hoybukt Sydost	3						1							
Inzigkofen	68			2							4			
Jagersshohle	45						11							
Kervara	5													
Kotedalen							U							
Kunda	1822						36							
La Riera Asturian										90				
La Riera Azilian										21				
Lepenski Vir - Phase I	2													
Lepenski Vir - Phase III	4													
Loddesborg	2						1					12		
Lundfors B	2													
Magleo	9													
Malerfels	U													
Mollegabet I							U							
Mollegabet II							U							
Narva	289						4							
Norsminde	U						U							
Nyelv Nedre Vest	21						7							
Ogaarde	212						59				1			
Oleni Ostrov	U													
Olmanas	1													
Orelunds Mose	1								1					
Padina I	37							1						
Pobiel 10							U							
Porvoo	3													
Priory Midden							3							
Romagnano	U		U											
Rottjarnslid							5							
Saarijarvi	41													
Saunapelto-Perunamaa	1													
Schela Cladovei					23									
Segebro	18						18		1			4		
Siltapellonhaka	6													

Table 2.12c (contd)

SITE	Beaver	Crab	Fen Turtle	Frog	Greek Tortoise	Marsh Woundwort	Otter	Pond Terrapin	Pond Tortoise	Sea Urchin	Toads	Water Vole	Water Sedge	Yellow Water Lily
Siltapellonhaka II	7													
Skateholm I	12						30					25		
Skateholm II	3						18		2	U		15		
Spiginas	U													
Svaerdborg I	U						U		9					
Svaerdborg II	U						U							
T Ruoksmäa	27													
Tallikaaro	2						1							
Teviec	U													
Thatcham	U			6								U		
Tingbjeraard	6													
Tjikkitrask	14													
Toppinen	1													
Torkop	56													
Uzzo Cave										U				
Vedbaek Henriksholm Bogebakken	U													
Vedbaek Vaenget Nord	U													
Vinde Helsing Mose	9						4							
Viste	U													
Vlasac	71								317					
West Carse	MNI 9													
Zutphen-Ooijerhock	5													
Zvidze	U						U							

U - unspecified number of finds

P - present at site but in insignificant quantities in terms published of numerical analyses

Table 2.12d - Latin Names of Species in Tables 2.12a-c

Common Name	Latin Name
Atlantic Puffin	<i>Fratercula arctica</i>
Auk	<i>Alle</i> spp.
Barnacle Goose	<i>Branta leucopsis</i>
Bean Goose	<i>Anser fabalis</i>
Bearded Seal	<i>Erignathus barbatus</i>
Beaver	<i>Castor fiber</i>
Bittern	<i>Botarus stellaris</i>
Black Guillemot	<i>Cephus grylle</i>
Black Headed Gull	<i>Larus ridibundus</i>
Black Stork	<i>Ciconia ciconia</i>
Black Throated Diver	<i>Gavia arctica</i>
Black-Backed Gull	<i>Larus</i> spp.
Bottlenose Whale	<i>Hyperoodon ampullatus</i>
Bottle-Nosed Dolphin	<i>Tursiops truncata</i>
Brent Goose	<i>Branta bernicula</i>
Brunnich's Guillemot	<i>Uria lomvia</i>
Common Crane	<i>Grus grus</i>
Common Dolphin	<i>Delphinus delphis</i>
Common Gull	<i>Larus canus</i>
Common Porpoise	<i>Phocoena phocoena</i>
Common Scoter	<i>Melanitta nigra</i>
Common Seal (Harbour Seal)	<i>Phoca vitulina</i>
Common Tern	<i>Sterna hirundo</i>
Coot	<i>Fulica atra</i>
Cormorant	<i>Phalacrocorax carbo</i>
Crab	<i>Brachyura</i>
Curlew	<i>Numenius arquata</i>
Dalmatian Pelican	<i>Pelicanus crispus</i>
Diver	<i>Gavia</i> spp.
Dolphin	<i>Delphinidae</i>
Duck	<i>Anadidae</i>
Eider	<i>Somateria mollissima</i>
Fen Turtle	<i>Emydinae</i> sp.
Ferruginous Duck	<i>Aythya nyroca</i>
Frog	<i>Anura</i>
Fulmar	<i>Fulmarus glacialis</i>
Gannet	<i>Sula bassana</i>
Gery Heron	<i>Ardea cinerea</i>
Goldeneye	<i>Bucephala clangula</i>
Goosander	<i>Mergus merganser</i>
Goose	<i>Anseriformes</i>
Great Auk	<i>Pinguinus impennis</i>
Great Crested Grebe	<i>Podiceps cristatus</i>
Great White Egret	<i>Egretta alba</i>
Grebe	<i>Podiceps</i> spp.
Greek Tortoise	<i>Testudo graeca</i>
Greenland Seal (Harp Seal)	<i>Phoca groenlandica</i>
Green-Winged Teal	<i>Anas crecca carolinensis</i>
Greylag Goose	<i>Anser anser</i>

Table 2.12d (contd)

Common Name	Latin Name
Grey Seal	<i>Halichoerus grypus</i>
Guillemot	<i>Uria aalge</i>
Gull	Laridae
Heron	<i>Ardea</i> spp.
Herring Gull	<i>Larus argentatus</i>
Killer Whale	<i>Orca orca</i>
King Eider	<i>Somateria spectabilis</i>
Kittiwake Gull	<i>Rissa tridactyla</i>
Lesser Black-Backed Gull	<i>Larus fuscus</i>
Little Stint	<i>Calidris minuta</i>
Long-Tailed Duck	<i>Clangula hyemalis</i>
Mallard	<i>Anas platyrhynchos</i>
Manx Shearwater	<i>Puffinus puffinus</i>
Marsh Woundwort	<i>Stachys palustris</i>
Merganser	<i>Mergus</i> spp.
Monk Seal	<i>Monachus monachus</i>
Mute Swan	<i>Cygnus olor</i>
Osprey	<i>Pandion haliaetus</i>
Otter	<i>Lutra lutra</i>
Pelican	Pelicanidae
Pilot Whale	<i>Globicephala malaena</i>
Pink-Footed Goose	<i>Anser brachyrhynchus</i>
Pintail Duck	<i>Anas acuta</i>
Pochard	<i>Aythya clypeata</i>
Pond Terrapin	<i>Squamata colubridae</i>
Pond Tortoise	<i>Emys orbicularis</i>
Porpoise	<i>Phocena</i> spp.
Razorbill	<i>Alca torda</i>
Red Necked Grebe	<i>Podiceps grisegena</i>
Red Throated Diver	<i>Gavia stellata</i>
Red-Breaster Merganser	<i>Mergus serrator</i>
Reed Bunting	<i>Emberiza schoeniclus</i>
Ringed Seal	<i>Phoca hispida</i>
Rorqual	<i>Balaenoptera</i> spp.
Sandpiper	<i>Calidris</i> spp.
Scaup	<i>Aythya marila</i>
Scoter	<i>Melanitta</i> spp.
Sea Urchin	Echinoidea
Seal	Phocidae
Shag	<i>Phalacrocorax aristotelis</i>
Shelduck	<i>Tadorna tadorna</i>
Shoveler Duck	<i>Anas clypeata</i>
Smew	<i>Mergus albellus</i>
Snipe	<i>Gallinago gallinago</i>
Sperm Whale	<i>Physeter macrocephalus</i>
Stork	<i>Ciconia</i> spp.
Swan	<i>Cygnus</i> spp.
Teal	<i>Anas crecca</i>
Toad	Anura

Table 2.12d (contd)

Common Name	Latin Name
Tufted Duck	<i>Aythya fuligula</i>
Velvet Scoter	<i>Melanitta fusca</i>
Walrus	<i>Odobenus rosmarus</i>
Water Sedge	<i>Carex aquilatis</i>
Water Vole	<i>Arvicola terrestris</i>
Whale	Cetacea
White Beaked Dolphin	<i>Lagenorhynchus acutus</i>
White Fronted Goose	<i>Anser albifrons</i>
White Pelican	<i>Pelicanus onocrotalus</i>
White Stork	<i>Ciconia ciconia</i>
White Whale (Beluga)	<i>Delphinapterus leucas</i>
White-Tailed Eagle	<i>Haliaeetus albicilla</i>
Whooper Swan	<i>Cygnus cygnus</i>
Wigeon	<i>Anas penelope</i>
Yellow Water Lily	<i>Nuphar polysepalem</i>

Table 3.1 Gear employed in traditional fisheries

Table 3.1a Fishing techniques and gear used in traditional fisheries

Group Name/Location	Fishing Gear							Refs
	Traps	Weirs	Nets	Projectiles	Poisons	Hooks	Boats	Miscellaneous techniques/implements
ASIA								
Kelantan - Malaysia			■			■	■	
India	■	■	■	■		■	■	84, 85, 77, 213
AFRICA								
Africa - Ivory Coast	■	■	■			■		62, 154
Africa - Niger Delta	■	■	■					114, 77, 207
Africa - Lake Turkana			■	■				178
Africa - tropical	■	■	■	■	■	■	■	77, 179, 207
EUROPE								
Black Sea						■		23
Caspian Sea						■		23
Danube	■	■	■	■		■		7, 8, 45
Eastern Europe	■			■	■	■		70, 75, 195, 23
England		■				■		176
England & Wales	■	■	■	■		■		93, 95, 96
Europe	■	■	■			■		23, 151
Faroes						■		13
Finland	■							23
France		■		■		■		23, 159, 151
Germany	■	■		■			■	52, 165
Hungary		■				■		45
Iceland						■		96, 145, 195
Ireland		■		■				205, 206
Kamchatka	■	■	■	■				168, 185
Netherlands	■	■				■		23
North Catalonia			■			■		18
Norway						■		45, 96
Orkney			■			■		34
Russia						■		45
Scandinavia	■	■	■			■		146, 130, 137, 23
Scotland		■	■	■		■	■	145, 36, 69, 118, 119
Volga	■	■	■			■		45
Wales			■	■		■	■	204, 93

Table 3.1a (contd)

Group Name/Location	Fishing Gear								Refs
	Traps	Weirs	Nets	Projectiles	Poisons	Hooks	Boats	Miscellaneous techniques/implements	
ARCTIC & SUB-ARCTIC GROUPS									
Aleut	■	■	■	■		■	■	■	28, 121, 158
Anadyr River Eskimo			■	■			■		185
Evenians	■	■	■	■		■	■	■	209
Evenks	■	■	■	■		■	■	■	209
Greenland Inuit		■	■	■		■			29, 45, 73, 96, 122, 126, 128, 151
Helmens			■	■			■		185
Inuit	■	■	■	■		■	■	■	38, 105, 157, 173-4, 210, 216, 218
Kets	■	■	■	■		■	■	■	209
Khants	■	■	■	■		■	■	■	23, 209
Koryaks			■	■			■		185
Lower Amgun River Negidals			■	■			■		185
Mans	■	■	■	■		■	■	■	209
Nirths			■	■			■		185
Ob River						■			45
Oroches	■	■	■	■		■	■	■	185, 209
Oroks			■	■			■		185
Saams	■	■	■	■		■	■	■	23, 67, 209
Selkups	■	■	■	■		■	■	■	209
Udegeits	■	■	■	■		■	■	■	209
Ulches			■	■			■		185
Wozuls		■	■	■		■			23
Yukagirs	■	■	■	■		■	■	■	209
JAPAN									
Ainu	■	■	■	■		■		■	45, 138, 200, 201, 202
Japan	■	■	■	■		■			1, 83, 89, 90, 133, 139, 140, 195
TEMPERATE NORTH AMERICA									
Native North Americans	■	■	■	■	■	■	■	■	77, 122, 151, 157, 195
Algonkian			■				■	■	208, 190, 59, 120
Angoon, Tlingit						■			103
Bella Bella	■	■	■	■		■	■		80
Bella Coola	■	■	■	■		■	■		97, 195
British Columbia Coast	■	■	■	■		■		■	
Calusa			■						116
Central & South California	■	■	■	■		■	■	■	161, 60, 50, 151
Chilkat, Tlingit				■					212
Chilula	■	■	■	■					101
Chinook	■	■	■	■		■	■	■	170, 151
Chumash			■	■		■	■		61, 217, 219
Coast Salish	■	■	■	■		■		■	181, 15
Coast Yurok	■	■	■	■		■		■	101
Dogrib			■				■	■	76
Eyak	■	■	■	■		■	■	■	44, 15
Fraser River				■					23
Great Lakes			■	■		■		■	31, 157
Haida	■	■	■	■		■	■	■	15, 103, 157, 212
Haihais	■	■	■	■		■	■		80

Table 3.1a (contd)

Group Name/Location	Fishing Gear							Refs
	Traps	Weirs	Nets	Projectiles	Poisons	Hooks	Boats	Miscellaneous techniques/implements
TEMPERATE NORTH AMERICA								
Haisla			■			■		103, 142
Hudson Bay group			■	■		■		45, 151
Hupa	■	■	■	■		■	■	101
Huron	■	■	■					190, 151
Iroqui		■	■	■		■	■	215
Karok	■	■	■	■		■		101
Klamath	■	■	■	■				101, 211
Kwakwiltl	■	■	■	■		■	■	99, 183, 33
Makah	■	■	■	■		■		44, 15
Mandau, Upper Missouri							■	151
Mattole	■	■	■	■				101
McCloud River		■		■				151
Misitassini			■	■		■		155, 149
Mohaves, Arizona						■		151
Nongatl	■	■	■	■				101
Nootka	■	■	■	■		■	■	101, 6, 103, 212
North Coast Salish	■	■	■	■		■	■	15, 97, 183
North west California	■	■	■	■	■	■	■	101
Northwest Coast	■	■	■	■	■	■		15, 101, 131, 152, 162, 170, 181
Ojibwa			■	■		■	■	31, 118, 191, 211, 214
Oowekeeno	■	■	■	■		■	■	80
Paiute, Pyramid Lake						■		110
Shasta	■	■	■	■				101
Shoshonee			■					151
Sinkyone	■	■	■	■				101
South California	■	■	■	■	■	■	■	157, 75, 257
South West Coast Salish	■	■	■	■		■		101, 183, 71
Southern Kwakwiltl	■	■	■	■		■		99
Tlingit	■	■	■	■		■	■	6, 33, 72, 74, 80, 103, 142, 144, 152, 170, 181, 183, 194, 212
Tolowa	■	■	■	■		■	■	101
Tsimshian	■	■	■	■		■		124
Virginian groups		■						151
Washoe, Truckee River Basin	■	■	■	■		■		110
Wiyot	■	■	■	■		■	■	101
Yana, California		■	■	■		■		102
Yurok	■	■	■	■		■		101, 60, 61
AUSTRALASIA								
Australian Aborigines	■	■	■	■	■	■	■	21, 47, 58, 63, 75, 143, 148, 151, 173, 188, 189
Papua New Guinea	■	■	■	■	■	■	■	45, 48, 16
Maori	■	■	■	■		■	■	14, 37, 78, 127, 166, 195, 215
OCEANIA								
Andaman Islanders			■	■				38
Botel Tobago			■	■		■	■	38
New Hebrides & Solomon Islands			■					38
Oceania		■	■	■		■	■	25, 38, 45, 134, 196
Tikopia - Solomon Islands			■	■		■	■	53

Table 3.1a (contd)

Group Name/Location	Fishing Gear							Refs	
	Traps	Weirs	Nets	Projectiles	Poisons	Hooks	Boats	Miscellaneous techniques/implements	
CENTRAL & SOUTH AMERICA									
Amazon				■	■	■	■	■	38, 171
Brazil			■			■	■	■	35, 54, 55
Equador					■				10
Peru					■				10
Tierra del Fuego				■					38
Equador					■				10

Table 3.1b - Further detail of dimensions, raw material of manufacture, and uses of fishing gear

Group Name	Fishing Gear
	TRAPS
India	tidal traps made of bamboo wickerwork tidal traps can be set in rows to act as a barrier/weir traps used in receding flood waters in rivers have wide range of forms up to 5' long, 3' high flood water traps often have more than one chamber hand traps used in lakes - up to 2 1/2' long, 2' diameter at bottom and 5-6" opening at top
Africa - Ivory Coast	traps made from reeds
Africa - Niger Delta	hand-hole baskets used to empty barrier devices
Africa - tropical	thrust baskets stationary basket traps with non-return devices may have several chambers the Jalu of Lake Victoria use traps with non return device for shore fishing the fish are driven into traps conical shaped plunge baskets up to 4' in diameter used in shallows Jaluo women of Lake Victoria use basketry traps traps widely used on the shallow turbid waters of Lake George, Uganda which is 2-3m depth across entirety plunge baskets used to take fish concentrated in banana stalk barriers basketry traps set in weirs
Danube	large cylindrical traps set in lines - each trap is c.1.3m long traps made from willow withes
Eastern Europe	close woven trumpet traps - cyprinids
England & Wales	basket trap of length c.74" set singly in rivers traps made of willow, hawthorn or hazel withes putcher - open weave trumpet trap 5-6' long, 2' diameter at mouth tapering to 5 1/2" putt - close weave trumpet trap in three sections, 5' diameter tapering to 2" - kelp bung to hold fish
Europe	trumpet traps used for flatfish
Finland	trumpet traps for eel are 1-1.3m in length with mouth 35-60cm diameter
Germany	trumpet traps for eel are 120-150cm long traps used with weirs are 5-6m length with mouth dimensions 1-1.5m
Kamchatka	traps set in weirs
Netherlands	open weave trumpet traps used for lamprey & eel: the lamprey trap is 0.5-1m long and 20-30cm diameter traps used for ruffe, smelt, river lamprey, cyprinids, pike, perch, eel, anadromous species, herring, anchovy by products of trap fishing for herring/anchovy are codling, flounder, gumard, sole, ray, cod
Scandinavia	trumpet traps fir, willow, pine, juniper wood casing bound with fir, pine, juniper root, birch, willow, line bast or flax
Volga	traps traditionally used for sterlet fishing
Aleut	fish collected in baskets
Evenians	plaited basket traps - fowling
Evenks	plaited basket traps - fowling
Inuit	traps take secondary place to spears & nets traps used by Alaskan Inuit throated traps used in rivers for a range of species including salmon funnel traps use for salmon in Lower Yukon region, up to 5' in diameter and 10' long traps may have guiding fences
Kets	plaited basket traps - fowling
Khants	plaited basket traps - fowling
Mans	plaited basket traps - fowling plaited basket traps - fowling
Saams	plaited basket traps - fowling
Selkups	plaited basket traps - fowling
Udegeits	plaited basket traps - fowling
Yukagirs	plaited basket traps - fish & fowling
Ainu	basket traps used to take salmon returning from spawning traps used to take salmon at spawning grounds basket traps scoop baskets used in rock pools and shallows by women
Japan	commonest method for cyprinids octopus pots
Bella Coola	conical trumpet traps used in mouths of rivers for eulachon
British Columbia Coast	cylindrical/box traps used with weir traps used singly trumpet trap made from strips of cedar or hemlock
Central & South California	traps commonly used to take salmon returning from spawning made from haxel withes
Coast Yurok	small triangular trap used in creeks
Huron	eel pots
Kwakuitl	traps used for eulachon
Mattole	traps used with weir
Shasta	traps used with weir & collecting baskets
South West Coast Salish	trap used in small streams
Tlingit	traps used with weir in rivers funnel trap used for eulachon trap
Tolowa	cylindrical trap - used with barrier
Washoe, Truckee River	basket scoops - quoted to be the easiest and most productive technique used in region small traps are c.7'6" long, 2' wide and 2' diameter - lifted each day large tubular traps - up to 50' long
Australian Aborigines	traps used for inland & coastal fishing
Papua New Guinea	cylindrical tube traps - lid shuts as fish enters trap conical basketry traps - baited basketry traps made of plaited vines

Table 3.1b (contd)

Group Name	Fishing Gear
	TRAPS
Maori	traps with non return devices made of netting on wooden framework ranging from 30" - 8' in length wickerwork pots c.2' long used for lamprey & crayfish eel pots >2' long used singly or set in weirs and baited with worms pots used over soft substrates have curved sides to ease hauling pots used over hard substrates have angular sides larger conical baskets used to store live lamprey and eel conical basket traps were set vertically at waterfalls to take elver used traps of netting or basketry
	WEIRS
India	weirs set in receding flood water in rivers for anadromous species (<i>hilsa</i>)
Africa - Ivory Coast	dry stone wall weirs used in conjunction with ground baits in coastal regions
Africa - Niger Delta	V-shaped barriers used to concentrate fish
Africa - tropical	weirs used in rivers, constructed from wood, stone and reeds weirs used in flood water fishing of large migratory fish barriers used for flood water fishing of large migratory fish grating barrier used in the Congo - the grating allows small fish to escape barriers constructed of earth used in Middle Niger to concentrate fish Nzoia River weir Jaluo of Lake Victoria - portable circular papyrus fence barrier up to 8' deep by 300 yards long Jaluo of Lake Victoria - matting fence with non return traps set on bottom set from a canoe Jaluo of Lake Victoria - kek weir papyrus spiral barrier with non-return device at centre used in river mouths dams used in Nile to concentrate fish barriers that rely on current not used Lake George - V-shaped weirs with non-return devices
Danube	barriers used with long-lines to concentrate fish
England	weirs with fixed traps used in tidal rivers
England & Wales	V-shaped tidal weirs up to 400 yards long constructed, some with central trap stone foundation - wattle upper weirs of putchers with wattle guiding fences weirs of putts with wattle guiding fences coops consisting of two parallel wattle fences which concentrate fish
Europe	weir used for herring barriers used as fish surrounds
France	V-shaped weir of stone used with apex facing downstream
Germany	weirs used for eel
Hungary	weir fences c15m long used to concentrate small cyprinids reed fence & hazel fibre cord
Ireland	V-shaped weirs with central conical net, fish collected on ebb tide stone and/or wattle fences
Kamchatka	1-2 weirs per village
Netherlands	V-shaped weir up to 1km in length used for anchovy & herring
Scandinavia	tidal & river weirs
Scotland	tidal traps known as 'yair' made of stone and wattle
Volga	weirs used for sturgeon
Aleut	weir used to take salmon in rivers
Evenians	barriers, dams, weirs&trap
Evenks	barriers, dams, weirs&trap
Greenland Inuit	weirs used for salmon
Inuit	weir used for pike stone used for weirs as timber is scarce
Kets	barriers, dams, weirs&trap
Khants	barriers, dams, weirs&trap weir used for pike perch cyprinids
Mans	barriers, dams, weirs&trap barriers, dams, weirs&trap
Saams	barriers, dams, weirs&trap
Selkups	barriers, dams, weirs&trap
Udegeits	barriers, dams, weirs&trap
Wozuls	weir used for pike perch cyprinids
Yukagirs	barriers, dams, weirs&trap
Ainu	weir used at cherry salmon spawning grounds in tributaries wattle fences guide fish to non-return traps set in shallow streams traps of secondary importance to spear wattle weirs used at night for cherry salmon & dace V-shaped wattle weir with central bag net used for dog & cherry salmon & trout with bag net held open by fishermen on platforms above weir
Japan	longst traditional weirs documented - up to 1000m in length Moriama Village weir measures 502m in length
Native North Americans	weirs used for a variety of migratory species
Bella Coola	weir used for salmon & steelhead
British Columbia Coast	weir considered most productive gear V-shaped tidal weirs used
Central & South California	weir - widespread use
Chilula	brush weir used post spawning for steelhead barrier used for lamprey taken at night
Coast Salish	V-shaped weir with central bag-net

Table 3.1b (contd)

Group Name	Fishing Gear
	WEIRS
Coast Yurok	V-shaped weir - post spawning salmon log barriers across small streams
Hupa	large V-shaped weirs requiring up to 100 men to build posts set every 8' to support fences which are slanted against current platforms built every 16' for dip nets - used for salmon, steelhead, sturgeon, lamprey
Huron	weirs set with nets
Iroquois	weirs used for smaller species
Karok	simple barriers
Kwakwaka'wakw	weir used for eulachon
Mallat	weir with platform constructed of stone and brushwood
Nongatl	weir & tripods
Nootka	barriers of fir boughs hung from a rope set under water to collect herring
North Coast Salish	tidal weir constructed of stone and wood
North West Coast	used at night - movement of fish processing camps located at weirs most V-shaped fixed weirs - smaller streams only tidal traps - used but much less common than riverine weirs portable weirs - small scale catches
Owkeeno	collapsible weir used - allows the weir to survive floods
Shasta	weirs constructed of stone and wood barriers built with a central opening 20-50cm wide which was closed with keystone or net stone walls guide fish into shallows
Sinkyone	barriers constructed of stone and brushwood
Tlingit	large V-shaped weir set with traps which points upstream used for salmon tidal weir 3-4' high used for salmon tidal weirs constructed of stone and wood river weirs constructed of wood and wattle fencing barrier of stakes set in very shallow water
Tolowa	large double barrier - spring salmon
Tsimshian	stone tidal weirs used for sockeye
Wiyot	portable barriers of woven brush matting used for salmon, lamprey & steelhead
Yurok	simple barriers biggest weirs e.g. Kepel dam
Australian Aborigines	stone tidal weirs & river barriers used by Kaiadilt of n w coast weirs constructed from stone & plant materials
Papua New Guinea	river dams made of stone, wood and clay
Maori	weirs often have guiding nets rather than fences weirs with hoop nets - grayling barriers V-shaped weirs with traps used in freshwater fisheries including eel barriers used in lakes or outside eel season are baited weirs used for lamprey & eel weirs made from stone and/or wattle fencing
Oceania	barriers made from lines with coconut fronds used in shallows to concentrate fish
	Nets
Kelantan - Malaysia	lift, gill & seine nets
India	gillnet, drag net, dip net used from boats in flood waters in rivers cast, set, drag nets used in lakes tidal set nets, seines, dip nets and drift nets used in estuaries seines up to 300' long, 30' deep with 2" mesh are the commonest type of net stationary bag nets used in wide shallow rivers with strong currents clap nets up to 25' wide and 10' long with mesh of 2" sunkers generally not used with seines (unless net is very small) hemp and cotton are preferred materials for nets, the nets are tanned to improve durability floats made from lightwood, bamboo & reeds
Africa - Ivory Coast	nets made with vegetable fibre and wooden floats
Africa - Niger Delta	lift nets on rectangular wooden framework used from bank or boats formal weights rare - use unmodified stones or balls of fired clay
Africa - Lake Turkana	small nets used for medium sized species
Africa - tropical	small hand nets used for prawns dip nets with triangular frame used in night fishing with torches nets used in flood water fishing for large migratory fish gillnets dragged behind canoes commonly used in flood fisheries lift-nets gillnets & tangle nets, fishermen drive fish to net - Lake Edward triangular clap nets on wooden frameworks used from boats - Lake Rukwa & Tanganyika scoop nets used from platforms built out over river - Lake Nyasa West Africa - cast nets up to 18' in diameter used from dugouts for shad seines up to 1/2 mile long required co-operation of hundreds of men to haul guiding fences leading to triangular nets used for large species (A leuciscus) - Middle Niger nets that rely on currents not used large gillnet (100-200 x 2-4m) set between 2 canoes used in deeper lake waters - Lake Tanganyika these gillnets are set on the bottom and hauled at dawn and at night - thread lures attached beach seines occasionally with central bag used - grasses attached to head and foot rope to scare fish to net Lake Albert - beach seine ropes with banana stalks attach used to concentrate fish - Lake George

Table 3.1b (contd)

Group Name	Fishing Gear
	NETS
Danube	lift nets from stationary boats or shore by single person - known from 1374 documentation tangle net comprising 1 coarse & 1 fine mesh - commonest technique for sterlet prior to 20th century nets made from cotton
England & Wales	shore seines up to 200 yards long stop nets = large bag nets set between two poles dip nets used from stone platforms on weirs dip nets on Y-frame from boats push nets = bag net on triangular frame hemp is the preferred material for traditional net manufacture, the net is tanned to reduce visibility rectangular wooden gauges used to measure mesh: oval x-section
Europe	gillnet & scoop net & seine all used for herring
Kamchatka	nets set in weir & dip-nets made with nettle fibres
North Catalonia	unmodified pebbles collected from shore used for set nets
Orkney	dip net used for saithe
Scandinavia	push nets & set nets & seines & dip nets & gillnets & trawls
Scotland	bag nets used to take fish from yair: baited lift nets on circular frame: shore seines
Volga	tangle nets used prior to 20th century for sterlet large sturgeon
Wales	fine meshed hand nets - small species
Aleut	nets used on rivers & inshore marine waters for salmon, trout & herring dip nets for small species and to remove catch from weirs nets made of giant kelp or sinew
Anadyr River Eskimo	set nets (10-20m long): cast nets: shore seines: conical drag nets (10m diameter)
Evenians	set net
Evenks	set net
Greenland Inuit	scoop nets used with weirs nets made from sinews
Helmens	set nets (10-20m long): cast nets: shore seines: conical drag nets (10m diameter)
Inuit	not used for inland fishing in east used for sealing & whaling in addition to fishing fine meshed weighted nets used for inshore fishing of tomcod and smelt shore seine used for herring & flounder, c.60' long, weighted and floated gillnets weighted with sinkers of walrus rib or antler and with floats of wood of varying form nets generally used in west only in more temperate area nets made from reindeer hide, baleen, sealskin, plant fibres (willow bark) net gauges of whalebone, antler: net shuttles of wood, antler gillnets set from shore used for salmon in preference to traps/weirs in most regions
Kets	set net
Khants	set net: dip net used in conjunction with barrier
Koryaks	set nets (10-20m long): cast nets: shore seines: conical drag nets (10m diameter)
Lower Amgun River Negidals	set nets (10-20m long): cast nets: shore seines: conical drag nets (10m diameter)
Mans	set net
Nirths	set nets (10-20m long): cast nets: shore seines: conical drag nets (10m diameter)
Oroches	set nets (10-20m long): cast nets: shore seines: conical drag nets (10m diameter)
Oroks	set nets (10-20m long): cast nets: shore seines: conical drag nets (10m diameter)
Saams	set net seine gillnet used for fishing under ice
Selkups	shore seine set net weighted with unmodified stone sinkers - 10m long x1m deep floats made from rolls of birch bark nets made with plaited willow twigs and nettle fibre net dipped in larch bark to reduce visibility
Udegeits	set net
Ulches	set nets (10-20m long): cast nets: shore seines: conical drag nets (10m diameter)
Wozuls	dip net used in conjunction with barrier
Yukagirs	shore seine set net nets made from plaited willow twigs and horse hair
Ainu	bag-nets used by women bag-net with torch lure used for salmon toward end of spawning bag nets used with weir fences rectangular bag nets used for dog & cherry salmon concentrated by currents small bag nets used for small species such as dace entangling nets set out from dugouts used for dog & cherry salmon & dace nets only used late in spawning season nets used under ice
Japan	tangle nets used for lobster nets used for tuna
Native North Americans	beach seine up to 300m, fish driven into nets nets used for whitefish & eulachon nets set in weirs used for migratory species unmodified rounded stones and grooved and notched stone sinkers used - most 3-5" long , 6-10 oz weight sinkstones have 2 or 4 notches or grooves and measure 1-6" long shell sinkers used mesh gauges made of wood or deer scapula, bone and wood netting needles
Algonkian	nets obtained in trade with Huron
Bella Bella	dip-net
Bella Coola	gillnets & seines post European contact introduction, dip-net conical bag nets used in river mouths for eulachon, dip-net

Table 3.1b (contd)

Group Name	Fishing Gear
	NETS
British Columbia Coast	dip-net used with weir weighted nets used in reef fishing seine weighted when used in open water fishing beach seine not weighted gillnet weighted when in shallow water
Calusa	gourds used to float set nets
Central & South California	seines commonly used
Chilula	dip net used from weir platform A-frame lift nets used with lamprey barrier
Chinook	dip-net used for eulachon beach seine up to 100-600' x 7-16' used for salmon
Chumash	dip-nets
Coast Salish	bag-net used with weir dip-net trawl-net used for freshwater sturgeon, whitefish, suckers
Coast Yurok	bag net used with weir dip-net
Dogrib	wide nets used at river eddies long nets used in lakes gillnets used for deep water fishing in summer
Eyak	dip-net used for eulachon
Great Lakes	gillnet up to 200 fathoms by 2' deep - floats used to mark the position of the net, stone sinkers nets often lost in bad weather dip-nets gillnet used under ice - lakes can be under ice for up to 4 months each year fyke-net & pound net & gillnet - trout, salmon, whitefish, sturgeon, perch, pike, bass, catfish, shad, eel, chub nets made from nettle or hemp fibre with headropes of basswood bark or leather cedar wood preferred for floats
Haida	dip-net
Haihais	dip-net
Haisla	fyke-net used for eulachon
Hudson Bay group	belief that nets would only catch fish if otters feet charms attached
Hupa	dip-nets used with weir gillnet used for salmon, steelhead, sturgeon, lamprey drag net used for salmon, steelhead, sturgeon, lamprey
Huron	seine net used under ice for herring-like species large set nets used in rivers & lakes for whitefish, trout, sturgeon nets used with weir hemp fibres used for nets
Iroqui	nets made of hemp or nettle fibre gillnets used for smaller species - set at night tangle nets used for sturgeon in lakes only
Karok	nets used for fishing & land hunting dip nets used for eel nets made from iris leaf fibre or deer sinew
Klamath	dip-net
Kwakuitl	dip-net used for eulachon
Makah	dip-net: trawl net used for salmon in lakes
Mattole	dip-net
Misitassini	gillnets - probably introduced technology trawls used for trout nets used for sturgeon
Nongati	A-frame lift nets set on tripods are used from weir platforms dip-net
Nootka	dip-nets used with barrier for herring
North Coast Salish	gillnets & seines post European contact introduction dip-net
North West Coast	dip-nets used for small surface fish at whirlpools & river mouths gillnet - set & drifted from canoes - night, nets anchored with large stone weights unmodified, grooved, waisted, naturally perforated seine measuring 8'x300' used for salmon : double drag seine used for sturgeon sheet bend knot used for all nets reef nets A-frame lift nets in widespread use for freshwater & marine fishing nets set in weirs nets made from willow bark, hemp, grass, spruce root, cedar bark, nettle fibre, flax, deer sinew, hemp herring nets made with hemp fibre wooden mesh gauges and netting needles lightwoods generally used for floats, average size is 11x4x1" cedar sticks used to float seines, redwood floats used for gillnets
Ojibwa	dip-net used from canoes to take whitefish at bottom of rapids
Oowekeeno	dip-net
Shasta	set net, dip net, long flat seine net & torch lure used for night fishing
Shoshonee	bundles of reeds used as net floats
Sinkyone	dip-net
South West Coast Salish	dip-net used with weir: dip-net also used in shallows
Southern Kwakuitl	dip-net
Tlingit	dip-net used for eulachon fyke-net used for salmon at river mouths
Tolowa	dip-net

Table 3.1b (contd)

Group Name	Fishing Gear
	NETS
Tsimshian	dip-net
Washoe, Truckee River	gillnet up to 50-300' x 3-10' with mesh of 1-3" used in shallow/calm regions of lakes and rivers 2" mesh used for widest range of catch - sheet-bend knot bag-net & lift-net & dip-net used from rocks or platforms for anadromous species
Wiyot	A-frame dip-nets used with barrier
Yana, California	dip-net
Yurok	dip-net used for sardine (in Athapascan territory) set nets rectangular wooden mesh gauges netting needles made by binding two sticks together
Australian Aborigines	Bagundji group used nets up to 90m in length for cod up to 225kg in weight nets weighted with clay sinkers and reed bundles used as floats
Papua New Guinea	hand nets - fish driven into net
Maori	nets c300m long used in offshore fishing nets used to land larger fish 38 different nets described: main types are hand nets, oval framed nets used on rivers, scoop, landing, bag, hoop, eel nets, seines, shrimp nets unmodified round pebbles or grooved & notched sinkers drag nets, set nets and conical bag nets were all used in tidal reaches of rivers beah seines up to 1 mile long required 500 men to haul them small conical nets baited with squid used for sea fishing long set nets used inshore for mackerel nets used for grayling lift nets & hand nets used for eel nets made from flax, the flax is smoked to improve durability large nets made in small sections which are then sewn together mesh gauges made of whale bone or wood, fingers also used net floats made of shaped wood or gourds net spreader made from tree branches
Botel Tobago	small net bags & skimming nets - shore species Manari net = 4-5 x 1m set on bamboo poles with floats and sinkers used from shore gillnet & seines - hauled by swimmers or boats in deep water
Oceania	small nets used by women nets used for inshore & offshore fishing
Tikopia - Solomon Islands	nets - operated by a single person scoop nets used for shore fishing by women net set between two poles gillnet used for shore fishing
Amazon	seine ranging from 30-80m long, fish are driven into nets nets made from inner tree bark e.g. <i>Cercroplia</i>
Brazil	shore seine used in estuaries
	Projectiles
India	spears with up to 16 bamboo points used from boats or shore for fish composite harpoon has 2-13 points
Africa - Lake Turkana	spears used for medium-large species
Africa - tropical	harpoon used for large fish open waters leisters common in riverine fishing barbed leisters used for mid-water fish barbed bone points used for fishing barbed gaffs used for night fishing with torches on Nile flood waters harpoons used for fishing on Lake Victoria & Lake Albert spears used in eddies on Nile from the shore or canoes <i>Arapaima</i> after hooking was despatched with harpoon or bow & arrow harpoons/spears generally made with barbed deer bone points
Danube	gaffs used to take stunned fish
Eastern Europe	fish spears
England & Wales	gaffs leisters
France	harpoon used to take ray
Germany	3-pronged leister harpoon used for pike
Ireland	thrust or thrown spear multiple barbed leister known as 'sun spear' with shaft over 20' used in deep water over hard substrates long pronged leister used in muddy shallows eel leister has 5-7 points with shallow barbs salmon spears with up to 8 points gaff
Kamchatka	gaffs
Scandinavia	leister
Scotland	leisters with detachable head & retrieval line used for anadromous/catadromous species gaffs
Wales	leisters with broad short prongs used over hard substrate long narrow pronged leisters used over soft substrate unbarbed leisters used for eel to preserve skins
Aleut	harpoon
Anadyr River Eskimo	gaffs
Evenians	harpoon used for large fish
Evenks	harpoon used for large fish spear & birch-bark torch: spear & platform: ice fishing

Table 3.1b (contd)

Group Name	Fishing Gear
	PROJECTILES
Greenland Inuit	salmon leister - example recovered at Lake Fjord, Tutilik, East Greenland
Helmens	gaffs
Inuit	slotted bone points used for fishing harpoon toggle head harpoon spears used in shallow water fishing leister with 3 points - also used with weirs - generally for large species fish spears generally made of reindeer antler lance used for marlin leister points made from antler, ivory, bone bow & arrow used for fishing
Kets	harpoon - large fish: 3-pronged leister
Khants	multiple uniserial barbed arrowheads used for game birds & waterfowl biserial arrowheads used for fish gaff - used with weir harpoon used for large fish
Koryaks	gaffs
Lower Amgun River Negidals	gaffs
Mans	harpoon used for large fish
Nirths	gaffs
Oroches	gaffs harpoon used for large fish
Oroks	gaffs
Saams	harpoon used for large fish leister used for Arctic charr
Selkups	harpoon - large fish
Udegeits	harpoon used for large fish
Ulches	gaffs
Wozuls	gaff used with weir biserial arrowheads used for fish
Yukagirs	harpoon used for large fish
Ainu	fish spears used to take spawning salmon spear & torch used on salmon spawning grounds toward end of spawning season large spear with one large barb used for larger salmon species (e.g. dog salmon) small spear with small barb used for smaller species (e.g. cherry salmon & dace) spears often used from peep huts in crepuscular periods & from dugouts at night toggle head harpoon used for larger fish species spears used at night with torch lures in shallows for large species
Japan	spear used for surf fish leister
Bella Bella	gaff leister
Bella Coola	leister spear used for flatfish gaff used for trout
British Columbia Coast	spears used with weir spear used for salmon fishing harpoon with up to 3 detachable points used for fishing points made with lightwood shaft, bone, slate, antler or wood point and cherry bark bindings
Central & South California	double point harpoon used for salmon
Chilkat, Tlingit	only Tlingit group to use leister - used under ice only for flounder
Chilula	gaff leister
Chinook	leister used for anadromous species gaff with detachable hook and retrieval line used for sturgeon
Chumash	harpoon used for large ocean fish
Coast Salish	gaff leister used for flounder
Coast Yurok	baited gaff used for inshore salmon fishing leister
Eyak	gaff leister used for eulachon
Fraser River	harpoon used for sturgeon
Great Lakes	spears used for large fish such as sturgeon & trout gaffs used for sturgeon harpoon up to 30' long used for sturgeon
Haida	gaff leister
Haihais	gaff leister
Hudson Bay group	leister
Hupa	gaff togglehead harpoon used for salmon, steelhead, sturgeon, lamprey leister
Iroqui	harpoons used for lake fishing of sturgeon
Karok	gaff used for lamprey & eel fishing leister used in clear shallows toggle head harpoons used for larger fish species
Klamath	multi-pointed spear used in deeper water - increasing the number of points increases chance of catch gaff leister

Table 3.1b (contd)

Group Name	Fishing Gear
	PROJECTILES
Kwakuitl	gaff double pointed harpoon used for salmon
Makah	gaff leister
Mattole	gaff leister
McCloud River	harpoon with 3 pronged detachable head used for salmon
Misitassini	spears used for sturgeon
Nongatl	gaff leister
Nootka	harpoon & leister used to take salmon at end of spawning runs gaff
North Coast Salish	leister used for flatfish & sole
North West Coast	wood self spears used for flatfish and other small species long spears used for night fishing from canoes harpoons used for fishing of river outlets and deep streams often from scaffolds toggle head harpoon used for larger fish species gaff leister tips of points scorched to reduce visibility to fish, bindings waterproofed with pitch bow & arrow used for fishing in slow waters
Ojibwa	barbed bone point used in fishing spears harpoons used for sturgeon
Oowekeeno	gaff leister
Paiute, Pyramid Lake	
Shasta	barbed spear used for salmon spear & torch used for night fishing gaff leisters
Sinkyone	gaff leister
South West Coast Salish	sealing harpoons up to 50" long used in larger water bodies (bays, river mouth) for sturgeon & salmon gaff used for sturgeon & salmon
Southern Kwakuitl	gaff leister bow & arrow used for fishing
Tlingit	gaff used from riverbank or boat for salmon & steelhead spears used to take fish at simple stake barriers gaff salmon harpoon comprising a detachable bone point held by leather line
Tolowa	gaffs used for night fishing of lamprey concentrated with torches leister
Tsimshian	spears used with weirs gaff leister
Washoe, Truckee River	harpoon with single or double point used for fishing
Wiyot	gaff leister
Yana, California	toggle head harpoon used for larger fish species
Yurok	gaff leister
Australian Aborigines	single & multiple point spears used in conjunction with weirs - made from wood, bone, bamboo, stingray spine spears & spear thrower leisters
Papua New Guinea	bow and arrow used for sport fishing spears
Maori	barbed bone spears used for despatching barracuda after hooking hard-wood spears used for stingray up to 600lbs spears used for flounder & skate spears of whale bone or wood up to 4' shaft used from platforms built over river to take eel spears of whale bone or wood used in lakes from boats for eel
Andaman Islanders	barbed points used for pig hunting only
Botel Tobago	spear used for large species in deep water
New Hebrides & Solomon Islands	barbed points used for fishing
Oceania	slotted bone points used for fishing, hunting, fowling & warfare barbed multiple points used for fishing, hunting, fowling & warfare
Tikopia - Solomon Islands	spear bow & arrow used in fishing
Amazon	uniseriial barbed hpoons with cedar floats set on the retrieval line are used for large species leisters with 2-3 hardwood points up to 2.5m long used for night fishing with torch lures barbed hardwood points used for terrestrial hunting & fishing bow & arrow frequently used in fishing for large species
Tierra del Fuego	barbed points used for large fish & sea lion
	Poisons
Africa - tropical	poisons - <i>Euphorbia</i> & <i>Tephrosia</i> very common in Belgian Congo & Zambezi bottom sediments stirred up to suffocate fish poisons used

Table 3.1b (contd)

Group Name	Fishing Gear
	POISONS
Ecuador	<i>Verbascum</i> & <i>Scrophulariaceae</i> : saponins
Eastern Europe	<i>Verbascum/Cyclamen/Anamirta</i> & <i>quick-lime</i> piscicides gathered by women plants placed directly into water or in ground bait
Native North Americans	bottom sediments stirred up to suffocate fish
North West Coast	poisons occasionally used in slow waters
South California	tanins widely used willow leaves placed over small ponds to suffocate fish
Australian Aborigines	tanins from gum trees
Papua New Guinea	Euphorbia
Amazon	areas of small streams dammed for poisons
Ecuador	<i>Verbascum</i> & <i>Scrophulariaceae</i> : saponins
Peru	<i>Verbascum</i> & <i>Scrophulariaceae</i> : saponins
	Hooks
Kelantan - Malaysia	hand-lines
India	barbed hooks bamboo rods used hand-lines, with lead sinkers generally used for night fishing long-lines with baked clay sinkers lines made from cotton & hemp, tanned to improve durability ground baits used, particularly for carp fishing live bait often tied just above hook floats of peacock feathers, reeds, grasses
Africa - Ivory Coast	thorn hook long-lines up to 150m lines made from raffia/pineapple fibre
Africa - tropical	hook & gorge baited circular hooks used on long-lines set at night for catfish lines & long-lines used in fast flowing rivers & waterfalls large hooks used to take fish (<i>Lates</i> sp) up to 40kg on long-lines baited circular hooks used for catfish on long-lines unbaited triple hook used for trolling <i>L. stappersii</i> long-lines up to 1 mile in length set on lake bottoms used pre-contact hand-lines troll-line used for <i>Lucioides stappersii</i> - possibly European introduction British Guiana - <i>Arapaima</i> up to 15' & 400lbs taken on baited hooks baited line on supple rod springs up when bite is taken
Black Sea	floated long-line used for sturgeon
Caspian Sea	floated long-line used for sturgeon
Danube	3 types of sturgeon hook hook size varies with size of fish sought traditional hooks small compared to size of fish taken <i>Huso</i> hook range in size from 12-19cm (generally 16-17cm) wels hook multiple point hook (c.5cm) used for wels & sterlet long-lines of samolovs or <i>Huso</i> hooks sturgeon long-lines are weighted and floated to keep the hooks just above the bottom lines made of hemp fibre lines treated with oak/pine sap to improve durability beef lung used as bait on sturgeon long-lines range of floats used: animal lungs, hollow pumpkins, willow/poplar/pine bark floats attached to bend in hook, shank or line
Eastern Europe	samolov - hook floated so that the point faces the substrate long-line
England	long-line, weighted to keep lines on bottom
England & Wales	feather lures set on troll-lines troll-lines set with up to 15 hooks small lines long-lines: up to 120 hooks, mussel used as bait lines made of hemp fibre
Europe	long-line used for ray
Faroes	cod hooks commonly used for porbeagle fishing
France	wooden line grapnels used to retrieve lines
Hungary	hooks used for pike, small cyprinids used as bait
Iceland	long-lines up to 10 miles in length
Netherlands	long-lines used for eel, cod & haddock marine long-lines floated and weighted
North Catalonia	lines weighted with unmodified pebbles collected from shore
Norway	long-lines up to 10 miles in length antler/juniper wood hooks with perforation at bend for bait used for cod
Orkney	set line fixed to shore used for saithe long-lines used for cod & ling
Russia	bone composite hook
Scandinavia	hooks bobbing for eel long-lines
Scotland	long-lines up to 300-1500 fathoms, set with 300-500 hooks set lines - set & hauled at low tide herring, haddock & sandeel used as bait

Table 3.1b (contd)

Group Name	Fishing Gear
	HOOKS
Volga	19th century sterlet hook (8-10cm) large sturgeon taken on hooks with feather lures lines may have floats
Wales	bobbing for eel
Aleut	composite spruce wood & bone hooks used for halibut & cod halibut & cod lines made from giant kelp, weighted and floated
Evenians	set line
Evenks	set line
Greenland Inuit	bone/flint composite hooks bound with whale skin strips single piece hooks most common all hooks are barbed long-lines up to 10 miles in length lines of vegetable fibres, hemp lines of seal skin used for halibut fishing
Inuit	hooks made from reindeer antler weighted hooks & multiple barb hooks used for cod & halibut troll-lines with lures used for cod lines used through ice lines made from reindeer hide unmodified line sinkers fish-shaped lures of ivory, bone, antler & wood sinkers of whalebone jaws
Kets	set line
Khants	fir wood hook trolls floated set line used for pike & perch, small fish used as bait lines made of split pine roots leather placed around shank join to prevent pike biting through line
Mans	set line
Ob River	sturgeon hook weighted and floated to keep hook just above surface U-shaped hook used for sterlet
Oroches	fir wood hook trolling, small fish used as bait set line
Saams	single piece fir wood hook antler hook 8-10.5cm: perforated at bend for float/bait bone, juniper, heather, honeysuckle, birch wood hooks 8-9cm long hooks used for ice fishing composite hooks used for large fish
Selkups	fir wood hook trolls set line, small fish used as bait
Udegeits	set line
Wozuls	floated set lines used for perch & pike, small fish used as bait lines made of split pine roots leather placed around shank join to prevent pike biting through line
Yukagirs	hooks set line
Ainu	coho hook used for trolling salmon long-line & samolov used for sturgeon lines used under ice lines made from willow fibre
Japan	single or double hook used with troll line fixed & long lines hand-lines with up to 6 hooks used over rocky substrates, line sinker weighted troll line used for pelagic species such as tuna, live & dead baits used lines used for squid
Native North Americans	thorn hooks single piece & composite: materials wood, deer/elk bone, slate shanks bi-points ranging in size from 3-20cm spruce wood hook used for halibut East Coast of America - thorn hooks used salmon & cod trolled long-line used for halibut, weighted with stone sinkers lines made from spruce root, nettle fibre, hemp and reindeer sinew plumb sinkers used on small lines
Angoon, Tlingit	only Tlingit group to take salmon with hook
Bella Bella	composite U- or V-shaped wooden hook used for halibut
Bella Coola	composite U-shaped wooden hook used for halibut, octopus used as bait
British Columbia Coast	composite V-shaped hook used for trolling, small fish used as bait hook & feather lure used for fly fishing salmon trolled, lines weighted lines made from bull kelp, nettle fibre & cedar bark
Central & South California	barbless hooks used for small fish e.g. trout shell/bone hooks intended to be swallowed whole
Chinook	large hardwood hook used for sturgeon trolling (up to 300lbs weight) sturgeon trolling lines made from twisted tree roots
Chumash	large circular bone or shell trolling hooks used for large predatory species
Coast Salish	trolling hook also used for aquatic birds composite U-shaped wooden hook used for halibut, octopus used as bait salmon trolled in open ocean

Table 3.1b (contd)

Group Name	Fishing Gear
	HOOKS
Coast Yurok	bobbing
Eyak	hook used for whitefish, cod, trout
Haida	composite U-shaped wooden hook used for halibut, octopus used as bait long-lines with up to 100 hooks used for cod & halibut salmon trolled in open ocean
Haihais	composite U- or V-shaped wooden hook used for halibut
Haisla	composite V-shaped wooden hook used for halibut line weighted to keep hook on bottom halibut line weighted and floated to keep hook just above substrate
Hudson Bay group	barbed hooks
Hupa	hook used for small freshwater species long-line with up to 40 hooks
Huron	composite hooks with bone shank and wooden barb used for sturgeon, pike & trout trolling for large fish species, lure of frog skins used lines made from hemp
Iroqui	line fishing for sturgeon lines made from hemp fibres
Karok	hooks - line fishing conducted as sport lines made from nettle fibre
Kwakwilt	hooks used for cod & halibut, weighted lines lines made from sinew, cedar bark & kelp line floats made from bladders or wood
Makah	composite U-shaped wooden hook used for halibut, octopus used as bait salmon trolled in open ocean trolling lines made from kelp
Misitassini	set-lines used for trout
Mohaves, Arizona	cactus spine hook
Nootka	composite U-shaped wooden hook used for halibut & cod, octopus used as bait straight shanked hook used in inshore fishing of cod, ling & sculpin salmon, bluefin tuna, albacore trolled in open ocean
North Coast Salish	salmon trolled in open ocean
North West Coast	shell, deer bone/antler hook used from shore & canoe hooks - mainly used in fast waters long-line used for inshore fishing halibut trolled hook bait - dried salmon, grasshopper gorge bait - mussel, clam troll - surf fish rattle lures used on troll-lines
Ojibwa	fish shaped lures of wood/bone used in line fishing barbed hooks generally used
Oowekeeno	composite U- or V-shaped wooden hook used for halibut
Paiute, Pyramid Lake	troll-line up to 7-200' long with 10-30 hooks
South West Coast Salish	baited gorge used for sculpin salmon trolled in open ocean
Southern Kwakwilt	salmon trolled in open ocean, live herring bait used trolling - small sinker placed above hook, line floated trolling lines made of giant kelp
Tlingit	hooks used for cod, codling, halibut, trout & eulachon composite V-shaped wooden hook used for halibut, line weighted to keep hook on bottom salmon trolled in open ocean lines made of giant kelp & red cedar bark fibres line floats made from bladders
Tolowa	bird claws, shell, bone hooks used in deep sea fishing, 2-3km offshore offshore fishing conducted with heavy lines and large line weights
Tsimshian	hook used for halibut salmon trolled in open ocean
Washoe, Truckee River Basin	bone gorge & composite fish hooks long-line & trolling line lines made from <i>Asclepias</i> fibre
Wiyot	bird claws, shell, bone hooks used in deep sea fishing, 2-3km offshore offshore fishing conducted with heavy lines and large line weights
Yana, California	small fish
Yurok	gorge set on long-line (40-50' long), with mussels/clams used for bait deer bone gorge used on rocky shores for bullhead barbless hooks used for small fish e.g. trout lines made from iris leaf fibre & human hair
Australian Aborigines	small circular bone hooks intended to be swallowed whole used for catfish hooks made from bone, fish bone, shell & wood
Papua New Guinea	composite hook comprising shell point & wooden shank wood-fern stem hooks used for night eel fishing

Table 3.1b (contd)

Group Name	Fishing Gear
	HOOKS
Maori	<p>hooks - large range of sizes</p> <p>single piece & composite hooks made from wood, shell, stone, bone (including human bone)</p> <p>bones of enemies particularly prized for fish hooks</p> <p>hook fishing commonest on rocky coasts - small V-shaped single piece hooks</p> <p>shank is grooved for line attachment</p> <p>dog teeth hooks or wooden hooks with bone barbs used for barracuda</p> <p>hooks not used for eel</p> <p>single piece & composite hooks</p> <p>long-lines used offshore</p> <p>troll-line of circular shell hooks with feather lure used for tuna</p> <p>only barracuda & mackerel taken with rod & line</p> <p>all other species taken with hand-line</p> <p>lines made from flax & rushes</p> <p>range of unmodified and grooved or perforated sinkers used on troll lines</p> <p>floats of wood</p>
Botel Tobago	<p>barbed hooks used for deeper water line fishing</p> <p>troll lines up to 16m long used in deeper water - trolled by swimmers or boats</p> <p>mussel most commonly used as bait</p>
Oceania	<p>line fishing in deep water for albacore & bonito</p> <p>pearl shell hooks used for bonito & albacore</p> <p>lines made from inner bark of <i>Urticaceae</i></p>
Tikopia - Solomon Islands	<p>hook used for shark fishing</p> <p>rods & hand lines</p> <p>troll used for bonito</p>
Amazon	<p>hardwood, ant mandible & harpy eagle claw hooks</p> <p>baits of larvae and fruit</p>
Brazil	hook fishing at sea from log rafts up to 20 miles offshore
	Boats
Kelantan - Malaysia	sophisticated boats with sails - attributed to steep shores
India	<p>boats used in night fishing with spears</p> <p>rafts & dugouts - rivers</p> <p>rafts - inflated skins, plantain stems or bundles of shola sticks</p> <p>skin float rafts can be deflated for transport</p> <p>dugout up to 13' long</p> <p>dugouts used for fishing inland waters where speed unimportant</p> <p>log rafts up to 15'</p> <p>long parallel side blade used in less vegetated waters</p> <p>short paddles used with rafts in marshy areas</p>
Africa - tropical	<p>range of types used</p> <p>simplest type is log with flattened base propelled by overarm strokes - Chad</p> <p>rafts made from logs tied together with creepers</p> <p>Jaluo - rafts up to 18' long made from bundles of papyrus reeds</p> <p>western Lake Victoria - papyrus not available rafts made from bundles of palm leaves</p> <p>dugouts large enough to transport 30-40 people</p> <p>dugouts only used at sea when wash-strokes added at gunwhales</p>
Germany	used for pike fishing in deeper water
Scotland	coracles - rivers
Wales	<p>canvas coracle - waterproofed with pitch - bays, estuaries & sea</p> <p>skin coracles with seats rowed, without seats paddles</p> <p>square shouldered paddles 50-74" long with 1 flat & 1 convex surface used on rivers</p> <p>larger paddle convex on both surfaces used in tidal regions</p> <p>paddles made from lightwoods - willow, ash, larch, elm</p>
Aleut	<p>baidarkas - skin canoes similar to the kayak - offshore travel/hunting/fishing</p> <p>kayaks - used for offshore cod/halibut fishing</p>
Anadyr River Eskimo	dugouts or flat planked boats
Evenians	<p>birch bark canoes used for fishing & transport</p> <p>dugouts used for fishing</p>
Evenks	<p>birch bark canoes used for fishing & transport</p> <p>bark boats waterproofed with tar, 3-7m long, 0.6-0.7m wide</p> <p>curved timber framework with bark covering</p> <p>dugouts used for fishing</p> <p>dugouts of aspen/poplar take 2-5 days to carve</p> <p>dugout shaped with boiling water: interior coated with tar</p>
Helmens	dugouts or flat planked boats
Inuit	<p>umiaks used for offshore hunting/fishing - up to 40' long can carry 2 ton cargo</p> <p>kayak used in more inshore waters</p> <p>skins used as boat coverings</p> <p>framework of driftwood or bones</p>
Kets	birch bark boats - fishing & transport: dugouts - fishing only
Khants	<p>birch bark canoes used for fishing & transport</p> <p>dugouts used for fishing</p>
Koryaks	dugouts or flat planked boats
Lower Amgun River Negidals	dugouts or flat planked boats
Mans	<p>birch bark canoes used for fishing & transport</p> <p>dugouts used for fishing</p>
Nirths	dugouts or flat planked boats
Oroches	<p>dugouts or flat planked boats</p> <p>birch bark boats - fishing & transport: dugouts - fishing only</p> <p>birch bark boats - fishing & transport: dugouts - fishing only</p>

Table 3.1b (contd)

Group Name	Fishing Gear
	BOATS
Oroks	dugouts or flat planked boats
Saams	birch bark canoes used for fishing & transport dugouts used for fishing plank boats
Selkups	birch bark boats - fishing & transport: dugouts - fishing only
Udegeits	birch bark canoes used for fishing & transport dugouts used for fishing
Ulches	dugouts or flat planked boats
Yukagirs	birch bark canoes used for fishing & transport dugouts used for fishing rafts - transport of goods
Native North Americans	skin & bark boats used for fishing
Algonkian	considered most skilled boat builders narrow boats - 2.5-5.5m in length 5-6m of bark required for boat c.3.25m in length
Bella Bella	dugout of cedar wood used for river & coastal travel cedar bark canoe used on lakes
Bella Coola	dugouts of cedar wood used in inland waters large canoes with skin or matting sails used for coastal travel paddles made from red alder
Central & South California	plank canoes - common
Chinook	transport canoe - up to 35 people - 50' long - used rivers & bays small, narrow canoe - faster moving - hunting shovel nosed canoe - marsh areas - 15' long all types made from single cedar log - split harrowed & heated to shape paddles are crescent shaped, c.4-5' long
Dogrib	birch bark canoes & rafts
Eyak	boats made from wood and skins
Haïda	considered best canoe makers - up to 60'; could carry 8 tonnes cargo heavy prowed canoes used for ice hunting
Haihais	dugout of cedar wood used for river & coastal travel cedar bark canoe used on lakes
Hupa	canoes obtained by trade from Yurok
Iroqui	boats used for lake fishing of sturgeon
Kwakwiltl	boats of 6-8 men in whale hunting
Mandau, Upper Missouri	skin coracles
Nootka	small dugout used for fishing & warfare large dugout used for transport red cedar preferred wood for dugout
North Coast Salish	men use different shape of paddle from women
North west California	boats used for fishing paddles made from ash, maple & yellow cedar
Ojibwa	used for dip-net fishing nets made of hemp or nettle fibre
Oowekeeno	dugout of cedar wood used for river & coastal travel cedar bark canoe used on lakes
Tlingit	canoes and short paddles used in offshore fishing long blades for steering canoes made from skin or bark dugout made from cedar, spruce or poplar
Tolowa	canoes used for seal hunting
Wiyot	canoes used to fish at barriers
Australian Aborigines	bark canoes, driftwood & bark bundle rafts, mangrove logs rafts made from bundles of rushes or logs, up to 15-20' bark canoes used for fishing clay hearths used to provide warmth or for cooking clay used to caulk ends of canoes
Papua New Guinea	large log rafts - boats not used for fishing except for poisoning
Maori	canoes up to 10m long used for offshore fishing
Oceania	canoes - used for bonito fishing
Tikopia - Solomon Islands	paddled canoes used for lake & sea fishing
Amazon	used for bow & arrow fishing used to set seines
Brazil	log rafts held together with vegetable fibres - stable speedy and manoeuvrable
	MISCELLANEOUS TECHNIQUES/IMPLEMENTS
India	dugouts submerged to prevent splitting - leaves may be placed in boat to attract fish which are taken as the boat is hauled baited spring-snares used for fishing
Africa - Ivory Coast	necklaces of fish vertebrae - adornment & ceremonial - common grave goods fish processed and discarded on beach
Africa - tropical	tropical regions - fish most vulnerable in seasonal floods - heavily exploited at this time rattles used to lure catfish boats with high prows intended for densely vegetated waters Worthington & Worthington state that the clap net is the only indigenous net long-lines set in deeper waters to prevent small fish taking the bait tickling widespread
Danube	samolovs used under ice short handled clubs used to stun fish under ice clubs used to despatch large fish taken on lines

Table 3.1b (contd)

Group Name	Fishing Gear
	MISCELLANEOUS TECHNIQUES/IMPLEMENTS
Eastern Europe	wooden clubs used to stun fish under ice
England & Wales	wooden clubs c. 12" long used to despatch large fish taken in nets
Ireland	scooches - similar to snow shoes - 3' long, 9" wide, 1" thick prevent sinking into mud - fig 5B & plate XXI Went 1952
Wales	pitch pine clubs, c. 15" long used to despatch fish
Aleut	disarded fish placed in water, particularly if brown bears present
Evenians	ice fishing large gear & fishing grounds owned by group, catch shared
Evenks	ice fishing conducted by women & elderly large gear & fishing grounds owned by group, catch shared
Inuit	soapstone lamps used as a source of heat & light bird bollas similar to line/net sinkers clubs used to despatch fish taken in traps & gillnets
Kets	ice fishing large gear & fishing grounds owned by group, catch shared
Khants	ice fishing large gear & fishing grounds owned by group, catch shared
Mans	ice fishing large gear & fishing grounds owned by group, catch shared
Oroches	ice fishing large gear & fishing grounds owned by group, catch shared
Saams	ice fishing large gear & fishing grounds owned by group, catch shared
Selkups	ice fishing large gear & fishing grounds owned by group, catch shared
Udegeits	ice fishing large gear & fishing grounds owned by group, catch shared
Yukagirs	ice fishing large gear & fishing grounds owned by group, catch shared
Ainu	large gear communally owned ritual discard with fish species placed in separate piles fish resembling serpents (e.g. eel) avoided but not taboo taboo to use seal oil for fuel - salmon oil commonly used
Native North Americans	herring rakes: deer ulna used for gutting herring polished slate blades clubs made from whale or sea mammal bone, woods & stone used to despatch large fish
Algonkian	though used throughout Algonkian prehistory they are very rare archaeological finds
British Columbia Coast	clubs used to despatch fish taken by trolling or in traps
Central & South California	double edge flint processing knife snares used for salmon fishing
Chinook	boat paddle slowly for trolling sturgeon herring rake
Coast Salish	herring roe collected on tree boughs/vegetation herring rake
Coast Yurok	clubs used to despatch large fish
Dogrib	fish staple
Eyak	herring roe collected on tree boughs/vegetation
Great Lakes	Huron nets traded to Algonkians
Haida	herring roe collected on tree boughs/vegetation fishing not esteemed often undertaken by slaves
Huron	snares made from hemp cords used for large fish fish bones never burned - considered disrespectful
Karok	thin flake quartz eel slitters
Klamath	ice fishing through holes
Kwakwilt	herring roe collected on tree boughs/vegetation herring rake
Misitassini	fish are supplement to diet only
Nootka	herring rake & baskets - used with barrier to collect fish at shore herring roe collected on tree boughs/vegetation
North Coast Salish	bailers of cedar bark herring rake
North West Coast	fish knives bone eel slitters large fish despatched with redwood clubs crab claw rattle signals catch on gillnet net spreaders made from tree branches tree bough placed underwater to collect roe - pine branches used to impart flavour to roe snares used in slow waters to take sturgeon up to 400lbs in weight seines not used in fast currents too difficult to haul
Ojibwa	ice fishing through holes
South West Coast Salish	herring rake club used to despatch fish taken in weir
Southern Kwakwilt	lines made from kelp which is dried, stretched and then rubbed with oil herring roe collected on tree boughs/vegetation
Tlingit	herring roe collected on tree boughs/vegetation herring rake set with up to 30-50 small bone points on a 14' wooden shaft clubs of hardwood used with weir
Tolowa	white stones placed in streams to make lamprey visible at night clubs used to despatch fish taken at barriers
Tsimshian	herring roe collected on tree boughs/vegetation
Virginian groups	wooden drying racks

Table 3.1b (contd)

Group Name	Fishing Gear
	MISCELLANEOUS TECHNIQUES/IMPLEMENTS
Washoe, Truckee River	no specialisation in fishing
Yana, California	snare made from human hair used for small fish
Yurok	small paddle shaped wooden jaw-breakers used to subdue salmon lightwood clubs used to despatch salmon hardwood clubs used to despatch sturgeon
Australian Aborigines	wooden clubs used to despatch fish scaffolds built over fishing grounds of primary freshwater species only catfish considered palatable boomerangs also used for fishing
Papua New Guinea	hand capture common in shallows branches set under water for eel snare used for fishing
Maori	all main fishing methods documented in early accounts - thought to be indigenous curved pole up to 25' long used to land larger fish - fig 22 Best 1929 baits and ground baits used with a range of gear eel collected with rakes eel not taken at spawning grounds - considered unpalatable eel despatched with bite to the back of the neck or wooden clubs eiders taken on boughs placed under water at eddies
Botel Tobago	freshwater fish not eaten - including eel caught at sea poor catch - fish bones thrown back into sea to attract more fish
Oceania	hooked albacore despatched with clubs
Tikopia - Solomon Islands	noose used for shark fishing
Brazil	log rafts used in areas with coral reefs - canoes used elsewhere

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Table 3.2 - Ethnographic & Ethnohistoric Groups
Commonly Observed Fishing Practices

Table 3.2a - Commonly Observed Fishing Practices

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
~	Coast Tlingit	~	offshore	~		103, 142
~	Northwest Coast	bag-net + boat	fresh to marine	shallows/still	commonly used in estuaries & lagoons	101
~	Northwest Coast	basket	freshwater	falls		101
~	Amazon	bow + arrow from boat	freshwater	clear water/shallow		171
~	India	cast net	freshwater	lake		85
~	India	dip net	brackish	inshore estuaries		85
~	Northwest Coast	dip-net	freshwater	shallow streams		101
~	Northwest Coast	dip-net + boat	fresh to marine	shallows/still	commonly used in estuaries & lagoons	101
~	Northwest Coast	diving	freshwater	deep streams		101
~	India	drag net	freshwater	lake		85
~	India	drift net	brackish	estuaries	used in deeper waters of estuaries	85
~	Northwest Coast	gaff	freshwater	deep streams		101
~	Northwest Coast	gaff	freshwater	shallow streams		101
~	Northwest Coast	gaff	freshwater	falls		101
~	Northwest Coast	gaff + boat	fresh to marine	shallows/still	commonly used in estuaries & lagoons	101
~	British Columbia coast	gillnet	marine	estuaries + open sea		101
~	Northwest Coast	gillnet	fresh to marine		used at night	101
~	Washoe	gillnet	freshwater	shallows/still	used in slower waters of lakes & rivers	110
~	Dogrib	gillnet	freshwater	deep waters	summer fishing of deep waters only	76
~	Northwest Coast	gorge	marine	rocky shore		101
~	India	hand trap	freshwater	lake shallows		85
~	Northwest Coast	harpoon	freshwater	deep streams		101
~	Northwest Coast	harpoon	freshwater	falls		101
~	Northwest Coast	hook	fresh to marine	fast waters		101
~	Karok	leister	freshwater	clear/shallows		101
~	Amazon	leister + torches	freshwater	clear water/shallow	used at night with torches as lures	171
~	Northwest Coast	lift-nets	freshwater	eddies		101
~	tropical Africa	lines + long lines	freshwater	rivers + waterfalls	set at night in fast moving waters	77
~	Dogrib	long net	freshwater	lakes		76
~	Wales	long-line	marine	shore	used at night	95
~	Iceland	long-line	marine	offshore		96
~	Greenland	long-line	marine	offshore		96
~	Norway	long-line	marine	offshore		96
~	Northwest Coast	long-line	marine	inshore		101
~	Maori	long-line	marine	up to 10 miles offshore		14
~	Maori	net	marine	up to 10 miles offshore		14
~	Northwest Coast	plunge-net	freshwater	falls		101
~	Ecuador	poison	tidal pools	slow/stagnant		10
~	Peru	poison	freshwater	slow/stagnant		10
~	Brazil	seine	brackish	inshore estuaries		35
~	India	seine	brackish	inshore estuaries		85
~	Northwest Coast	set line	fresh to marine	shallows/still	commonly used in estuaries & lagoons	101
~	Wales	set net	brackish to marine	~		95
~	India	set net	freshwater	lake		85
~	Wales	shore seine	estuaries	ebb tide		95
~	Northwest Coast	single head harpoon	freshwater	small streams	used in shallow waters	101
~	Northwest Coast	spear	freshwater	shallow streams		101
~	Northwest Coast	spear + boat	fresh to marine	shallows/still	commonly used in estuaries & lagoons	101
~	Siberia	spear + boat + torches	freshwater	rivers	used at night	209
~	Evenks	spear + platform	freshwater	rivers	used at night	209

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
~	Australian Aborigines	spears	marine	bays		148
~	Australian Aborigines	spears	marine to freshwater	estuaries		148
~	Australian Aborigines	spears	freshwater	rivers	used in conjunction with weirs	148
~	India	tidal set net	brackish	inshore estuaries		85
~	India	tidal trap	brackish	inshore estuaries		85
~	Ireland	tidal weirs	brackish		collected on ebb tide	206
~	Jad River, Transylvania	trap	freshwater	lower stretches of river		70
~	Northwest Coast	trap	fresh to marine	shallows/still	commonly used in estuaries & lagoons	101
~	Northwest Coast	trap	freshwater	deep streams		101
~	Northwest Coast	trap	freshwater	shallow streams		101
~	Northwest Coast	trap	freshwater	falls		101
~	British Columbia coast	trap + club	marine	inshore	set at night - hauled each morning	101
~	British Columbia coast	trap + club	freshwater	river	set at night - hauled each morning	101
~	Northwest Coast	trolling	marine	inshore		101
~	Northwest Coast	trot line	fresh to marine	shallows/still	commonly used in estuaries & lagoons	101
~	Paiute	trot-line	freshwater	lake		110
~	Northwest Coast	weir	fresh to marine	shallows/still	commonly used in estuaries & lagoons	101
~	Northwest Coast	weir	freshwater	shallow streams		101
~	Northwest Coast	weirs	fresh to marine	shallow	used at night when fish are active	101
~	Dogrib	wide net	freshwater	river eddies		76
albacore	Nootka	trolled	marine	open waters		15
all	Jad River, Transylvania	poisons	freshwater	lower stretches of river		70
all available species	England & Wales	weirs - putts + dip-nets	fresh to brackish	tidal regions - fast flow	used for shrimp-salmon	93, 95, 96
anadromous species	Netherlands	traps	freshwater			23
anadromous species	Native North Americans	weir + net	freshwater			151
anadromous species	Chinook	leister	freshwater			151
anadromous species	Washoe	bag-net	freshwater	faster water	used from platforms or rocks out over water	110
anadromous species	Washoe	lift-net	freshwater	faster water	used from platforms or rocks out over water	110
anadromous species	Washoe	dip-net	freshwater	faster water	used from platforms or rocks out over water	110
anadromous species	India	dip net	freshwater	river - deep flood waters		85
anadromous species	India	drag net	freshwater	river - deep flood waters		85
anadromous species	India	gillnet	freshwater	river - deep flood waters		85
anadromous species	India	weir	freshwater	river - receding flood waters		85
anadromous species	India	trap	freshwater	river - receding flood waters		85
anadromous species	India	small nets	freshwater	river - receding flood waters		85
Arctic charr	Siberia	leister	marine	shallows		23
barbel	Danube	lift-nets	freshwater	shallow-deep	used usually at 2-2.5m depth: summer	7, 8
barracuda	Maori	line + rod	marine	up to 10 miles offshore		14
basking shark	Ireland	toggle-harpoon	marine	coastal		206
bass	Great Lakes	gillnet/fyke-net	freshwater	lake		191
bluefin	Nootka	trolled	marine	open waters		15
bonito	Tikopia	troll	marine	deep waters		53
bream	Scandinavia	seine	freshwater	lakes		187
bullhead	Yurok	gorge	marine	inshore		60
bullhead	Greenland Inuit	hand fishing	marine	shoreline	used during the day	151

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
bullrout	Orkney	hand collected	marine	tidal pools	used at low tide - no technology required	34
burbot	Europe	hollow-log	freshwater			205
carp	Europe	bow + arrow	freshwater	surface waters	daylight	205
carp	Hungary	weirs	freshwater	lakes/shallow		45
catfish	Northwest Coast	riding + diving	freshwater			110
catfish	Great Lakes	gillnet/fyke-net	freshwater	lake		191
catfish	tropical Africa	circular hooks long line	freshwater	fast flowing waters	set at night - occupied with hunting during the day	207
chub	Great Lakes	gillnet/fyke-net	freshwater	lake		191
clupeids	Chumash	nets	marine	shore		191
cod	North Sea	long-lines	marine	inshore + offshore	used at night night when fish are active	176
cod	White Sea Coast	~	marine	offshore	summer	187
cod	Scandinavia	gillnet	marine	~		130, 137
cod	Scandinavia	seine	marine	~		130, 137
cod	Scandinavia	bottom-trawl	marine	~		130, 137
cod	Faroes	cod hook	marine	~		13
cod	Wales	trolling	marine	~		96
cod	Norway	hook	marine	~		45
cod	Netherlands	long-line + sinkers + floats	marine			23
cod	Netherlands	traps	marine	estuaries, inshore coast	by-product of herring trap fishery	23
cod	Native North Americans	trolling	marine			151
cod	Aleuts	hook	marine	deeper water		151
cod	Haida	long-line	marine			157
cod	Tlingit	hook	marine to brackish			44
cod	Eyak	hook	marine			15
cod	Nootka	U-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15
cod	Kwakwilt	hook	marine	deep water		15
cod	Nootka	hook	marine	inshore, rocky coast		103
cod	Nootka	gorge	marine	inshore, rocky coast		103
cod	Inuit	hook	marine	offshore		174
cod	Inuit	troll-line	marine	offshore		216
cod	Scandinavia	long-line	marine	~		130, 137
cod	Scotland	long-lines	marine	offshore	daylight - seas hazardous at night	36, 69
cod	Scotland	leisters	marine	shore	daylight - boats not used	36, 69
cod	Scotland	traps	marine	shore	daylight - boats not used	36, 69
cod	Scotland	nets	marine	shore	daylight - boats not used	36, 69
cod	Yurok	gorge + long-line	marine	shore	line set on shore	110
cod (large)	Orkney	long-line	marine	offshore, 7-20 miles		34
cod (small)	Orkney	set-line	marine	shore	line fixed to shore - takes small numbers of cod	34
cod (small)	Inuit	net	marine	inshore	fine meshed nets	174
codling	Scotland	small lines	marine	shore	daylight - boats not used	36, 69
codling	Netherlands	traps	marine	estuaries, inshore coast	by-product of herring trap fishery	23
codling	Tlingit	hook	marine to brackish			44
coho	Ainu	hook	freshwater	rivers		45
conger	Maori	in-curved hook	marine			37
crayfish	Europe	lift-net	fresh to marine	rising tide		39
cuttlefish	Europe	bobbing	freshwater		fish bait used	205
cyprinids	Danube	cylindrical trap	freshwater	river	traps lifted morning & evening	7, 8
cyprinids	Wozuls	weir + gaff/ dip-net	freshwater	shallow		23
cyprinids	Khants	weir + gaff/ dip-net	freshwater	shallow		23
cyprinids	Yugoslavia	trumpet traps close woven	freshwater			23
cyprinids	Netherlands	traps	freshwater			23
dace	Ainu	spear	freshwater			201
dace	Ainu	weir	freshwater	tributaries	used at night	201

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
dace	Ainu	small bag net	freshwater			200, 202
dogfish	Scotland	hand-line	marine	inshore		119
eel	Britain	V-shaped weirs	freshwater	shallow		160
eel	Europe	spear/leister	tidal rivers	ebb tide + strong water	during spawning runs: leisters not barbed to preserve skins	93
eel	Europe	bobbing	freshwater	rivers + lakes		93
eel	Ireland	thrusting spear	fresh to marine	shallow bays/ estuaries		205
eel	Ireland	leister	fresh to marine	deep water - hard substrate		205
eel	Wales	net	marine	inshore		95
eel	Wales	trap	marine	inshore		95
eel	Wales	spear	marine	inshore		95
eel	England	scoop-net	freshwater			56
eel	Europe	long-lines	freshwater	muddy river bottoms	bait: worms, small live fish, dead bait: May - late autumn	56
eel	Europe	spear	freshwater			56
eel	Europe	box	freshwater		bait or live eel lure	56
eel	Europe	trap	freshwater		bait	56
eel	Europe	seine	freshwater			56
eel	Europe	fyke net	freshwater			56
eel	Europe	weir	freshwater			56
eel	Ireland	gaff	freshwater	shore		56
eel	Ireland	bobbing	freshwater	shore		205, 154
eel	Netherlands	long-line	freshwater	lakes & rivers		23
eel	Netherlands	trumpet traps open woven	fresh to brackish	tidal stretches of river		23
eel	Germany	trumpet traps	freshwater			23
eel	Germany	weirs + traps	freshwater			23
eel	Finland	trumpet traps	freshwater			23
eel	Netherlands	traps	freshwater			23
eel	Yurok	gorge + long-line	marine	shore	line set on shore	101
eel	Karok	dip nets	freshwater			101
eel	Karok	gaffs	freshwater			101
eel	Great Lakes	gillnet/fyke-net	freshwater	lake		191
eel	Maori	weir	freshwater	river	night - torches	14
eel	Maori	spear	fresh-brackish	muddy waters	used from platforms built over river at night with torch lures	14
eel	Maori	rake	freshwater	river	night - torches	14
eel	Maori	lift-net + hand-net	freshwater	river	night - torches	14
eel	Maori	bob	freshwater	flood waters	daylight	14
eel	Maori	in-curved hook	marine			37
eel	Papua New Guinea	hook	freshwater		night	48
eel	Papua New Guinea	cylindrical tube traps	freshwater			48
eel	Papua New Guinea	branches under water	freshwater		left for several days	48
eel	Ireland	5 tine leister + boat	freshwater	shallow - vegetated	late spring/summer	205
eel	Ireland	7 tine leister + boat	freshwater	deeper water	late summer - fish concentrated in middle reaches of river	205
eel (yellow)	Ireland	leister	freshwater	shallow - muddy substrate	take yellow eel buried in mud	205
elver	Europe	fine meshed hand nets	fresh to brackish	~		93
elver	Maori	boughs placed under water	freshwater	eddies		14
elver	Maori	conical traps	freshwater	waterfalls	traps set vertically under falls	14
elvers	Wales	fine mesh net	fresh to marine	~		95
eulachon	Native North Americans	net	freshwater			151
fish roe	Northwest Coast	tree boughs	fresh to marine		roe collected after spawning	103, 99, 6, 97
flatfish	Ireland	thrusting spear	fresh to marine	shallow bays/ estuaries		205
flatfish	Europe	trumpet traps	marine	shallows, tidal areas		23

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
flatfish	Northwest Coast	self-spear	marine to brackish	inshore/shallows		110
flatfish	Bella Coola	spear	marine to brackish	shallows		15
flatfish	North Coast Salish	spear	marine to brackish	shallows		15
flounder	North Sea Coast	hand fishing	marine	shallows	locate fish with feet at low tide	154, 205
flounder	N Carolina	spear	marine	shore	night	205
flounder	Netherlands	traps	marine	estuaries, inshore coast	by-product of herring trap fishery	23
flounder	North Coast Salish	spear	marine	shallows/clear		103
flounder	North Coast Salish	spear	marine	shallows/clear		103
flounder	South Coast Salish	seine	marine	low tide, shore		103
flounder	Tlingit	leister	marine	shallow + under ice		103
flounder	Coast Salish	leister	marine to brackish			103
flounder	North Coast Salish	leister	marine to brackish			103
flounder	Maori	spear	marine		night	14
flounder	Inuit	seine	marine	inshore	shore seine	174
grayling	Scandinavia	seine	freshwater	lakes		187
grayling	Maori	net	freshwater			14
grayling	Maori	weir	freshwater			14
grey mullet	Maori	seine	marine to brackish	inshore + estuaries		37
gurnard	Netherlands	traps	marine	estuaries, inshore coast	by-product of herring trap fishery	23
gurnard	Maori	hook	marine			14
gurnard	Maori	set net	marine			14
haddock	Scandinavia	long-line	marine	~		130, 137
haddock	Scandinavia	seine	marine	~		130, 137
haddock	Scotland	long-lines	marine	offshore	daylight - seas hazardous at night	36, 69
haddock	Scotland	leisters	marine	shore	daylight - boats not used	36, 69
haddock	Scotland	traps	marine	shore	daylight - boats not used	36, 69
haddock	Scotland	nets	marine	shore	daylight - boats not used	36, 69
haddock	Scotland	small lines	marine	shore	daylight - boats not used	36, 69
haddock	Netherlands	long-line + sinkers + floats	marine			23
halibut	Native North Americans	boat fishing	marine			151
halibut	Native North Americans	long-line	marine	deeper water		151
halibut	Aleuts	hook	marine	deeper water		151
halibut	Yurok	gorge + long-line	marine	shore	line set on shore	110
halibut	Haida	long-line	marine			157
halibut	Bella Coola	hook	marine	deeper water		205
halibut	Tlingit	hook	marine to brackish			44
halibut	Tsimshian	hook	marine			74
halibut	Bella Coola	U-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15
halibut	Coast Salish	U-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15
halibut	Makah	U-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15
halibut	Nootka	U-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15
halibut	Haida	U-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15
halibut	Haihais	U/V-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15
halibut	Bella Bella	U/V-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15
halibut	Oowekeeno	U/V-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15
halibut	Haisla	V-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
halibut	Coast Tlingit	V-halibut hook	marine	deep water - 15-40 fathoms	shape of hook used - cultural tradition	15
halibut	Kwakwiltl	hook	marine	deep water		15
halibut	Greenland Inuit	hook	marine	offshore	focus of winter fishing	122
halibut	Northwest Coast	troll	marine			131
halibut	Inuit	hook	marine	offshore		174
herring	England & Wales	fine meshed drifted-nets	marine	inshore - spring spawning	night - visibility of nets	93, 95, 96
herring	England & Wales	gillnets	marine	offshore - autumn spawning	night - visibility of nets	93, 95, 96
herring	Scandinavia	bottom-trawl	marine	~		130, 137
herring	Scotland	drift-net	marine	inshore	night - visibility of nets	36, 69
herring	Scotland	hook	marine	inshore	occasional	36, 69
herring	Scotland	tidal weir	fresh to marine	tidal regions/ shallow		119
herring	Europe	drift-net	marine			39
herring	Native North Americans	gillnet	marine	inshore	night - visibility	157
herring	Native North Americans	weir	marine	inshore/shallow	weir	157
herring	Native North Americans	rake	marine	inshore/shallow		157
herring	Native North Americans	scoop net + boat + torch	marine	inshore/shallow	used at night when fish are active - torch used as lure	104
herring	Native North Americans	seine	marine	inshore/shallow		104
herring	Netherlands	weir	marine	inshore/shallow		23
herring	Netherlands	traps	marine	estuaries, inshore coast		23
herring	Aleuts	net	marine	inshore		67
herring	Northwest Coast	net	marine	inshore		101
herring	Nootka	barrier + rake/ dip-net/baskets	marine	shallow inshore	barrier encircled round fish by men	110, 6
herring	Nootka	rake	marine	inshore/shallow		103
herring	Nootka	dip-net	marine	inshore/shallow		103
herring	Tlingit	rake	marine	inshore/shallow		103
herring	Tlingit	dip-net	marine	inshore/shallow		103
herring	Chinook	rake	marine	inshore/shallow		103
herring	Chinook	dip-net	marine	inshore/shallow		103
herring	Kwakwiltl	rake	marine	inshore/shallow		103
herring	Kwakwiltl	dip-net	marine	inshore/shallow		103
herring	Coast Salish	rake	marine	inshore/shallow		103
herring	Coast Salish	dip-net	marine	inshore/shallow		103
herring	North Coast Salish	rake	marine	inshore/shallow		103
herring	North Coast Salish	dip-net	marine	inshore/shallow		103
herring	S W Coast Salish	rake	marine	inshore/shallow		103
herring	S W Coast Salish	dip-net	marine	inshore/shallow		103
herring	Inuit	seine	marine	inshore	shore seine	174
horse mackerel	Maori	troll	marine	inshore		14
huchen	Europe	bow + arrow	freshwater	surface waters	daylight	205
Huso	Danube	long-line + barrier	freshwater	~	Huso hook used	45
ide	Scandinavia	seine	freshwater	lakes		187
ide	Danube	lift-nets	freshwater	shallow-deep	used usually at 2-2.5m depth: summer	7, 8
lamprey	England	weir + fixed traps	freshwater	rivers - swift flow	night - movement of fish	176
lamprey	Hupa	gaff	freshwater			101
lamprey	Hupa	lift-nets from platform	freshwater	eddies	night - in waters that naturally concentrate fish	101
lamprey	Karok	lift-nets from platform	freshwater	eddies	night - in waters that naturally concentrate fish	101
lamprey	Yurok	lift-nets from platform	freshwater	eddies	night - in waters that naturally concentrate fish	101
lamprey	Tolowa	gaff + torch	freshwater	shallow	night	101
large	Siberia	harpoon	freshwater	rivers		209
large cod	Bagundji	nets	marine			66

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
large migratory fish	tropical Africa	weir	freshwater	flood waters		179
large migratory fish	tropical Africa	net	freshwater	flood waters		179
large pelagic species	Botel Tobago	lines	marine	deep waters	deep waters found close to shore	205
large pelagic species	Botel Tobago	seine	marine	deep waters	deep waters found close to shore	205
large pelagic species	Botel Tobago	gillnet	marine	deep waters	deep waters found close to shore	205
large pelagic species	Botel Tobago	troll	marine	deep waters	deep waters found close to shore	205
large pelagic species	Botel Tobago	spear	marine	deep waters	deep waters found close to shore	205
large species	Siberia	composite hook	fresh to			23
large species	British Columbia coast	harpoon + canoe + torch	marine		night	23
large species	Coastal Ainu	toggle head harpoon	fresh to marine			138
large species	Coastal Ainu	spear	fresh to marine	shallows	night - torches	138
large species	tropical Africa	harpoon	freshwater	open water		179
large species	Amazon	harpoon + floats from boat	freshwater	clear water/ shallow		171
large sturgeon	Volga	net	freshwater	~		45
large sturgeon	Volga	trap	freshwater	~		45
large sturgeon	Volga	weir	freshwater	~		45
larger species	Northwest Coast	toggle head harpoon	fresh to marine			110
larger species	Karok	toggle head harpoon	fresh to marine			110
ling	Nootka	hook	marine	inshore, rocky coast		103
ling	Nootka	gorge	marine	inshore, rocky coast		103
ling	Maori	in-curved hook	marine			37
ling (large)	Orkney	long-line	marine	offshore, 7-20 miles		34
loach	Danube	hand fishing	riverine	shallows		154, 205
mackerel	North Sea	long-lines	marine	inshore + offshore	night - feeding patterns	176
mackerel	Wales	trolling	marine	~		95
mackerel	Europe	drift-net	marine			39
mackerel	Aleuts	spear	fresh to marine			67
mackerel	Maori	line + rod	marine	up to 10 miles offshore		14
mackerel	Maori	long set nets	marine	inshore	set at low tide	14
medium sized species	Lake Turkana	spear	freshwater	littoral zone		178
medium sized species	Lake Turkana	small nets	freshwater	littoral zone		178
migratory species	England & Wales	shore seines	fresh to marine	estuaries esp		93, 95, 96
migratory species	Australian Aborigines	weirs	freshwater	rivers		148
mullet	India	beach seine	marine			77
pelagic spp.	Japan	hand-line	marine	rocky substrates	daylight - activity of fish + navigation	140, 88
pelagic spp.	Japan	trolling	marine	inshore-offshore		139
perch	Scandinavia	seine	freshwater	lakes	economically very important	187
perch	Scandinavia	seine	freshwater	lakes		187
perch	Wozuls	weir + gaff/ dip-net	freshwater	shallow		23
perch	Khants	weir + gaff/ dip-net	freshwater	shallow		23
perch	Khants	hook	freshwater			23
perch	Wozuls	hook	freshwater			23
perch	Netherlands	traps	freshwater			23
perch	Yurok	gorge/ long-line	brackish	shore	line set on shore	110
perch	Great Lakes	gillnet/fyke-net	freshwater	lake		191

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
pike	Europe	snare set on bottom	freshwater	shallows/calm	daylight	205
pike	Scandinavia	seine	freshwater	lakes	economically very important	187
pike	Germany	3-pronged leister	freshwater	vegetated lakeshore		165
pike	Germany	hand fishing	freshwater	~		165
pike	Hungary	hook	freshwater	lake + river		45
pike	Germany	harpoon	freshwater	clear shallows	night - torch lure	52
pike	Germany	harpoon	freshwater	deeper water	night - torch lure + boat	52
pike	Wozuls	weir + gaff/dip-net	freshwater	shallow		23
pike	Khants	weir + gaff/dip-net	freshwater	shallow		23
pike	Khants	hook	freshwater			23
pike	Wozuls	hook	freshwater			23
pike	Netherlands	traps	freshwater			23
pike	Huron	hook	freshwater			151, 190
pike	Great Lakes	gillnet/fyke-net	freshwater	lake		191
pike	Inuit	weir	freshwater			5
pike	Europe	bow + arrow	freshwater	surface waters	daylight	205
pike	Danube	lift-nets	freshwater	shallow-deep	used usually at 2-2.5m depth: summer	7, 8
plaice	North Sea Coast	hand fishing	marine	shallows	low tides - locate fish with feet	154, 205
plaice	Scandinavia	gillnet	marine			130, 137
plaice	Scandinavia	seine	marine			130, 137
plaice	Scandinavia	bottom-trawl	marine			130, 137
porbeagle	Scandinavia	long-line	marine			130, 137
porbeagle	Faroes	cod hook	marine			13
prawn	Europe	lift-net	fresh to marine	rising tide		39
ray	North Atlantic Coast	long-line	marine			159
ray	North Atlantic Coast	harpoon	marine	shallows		159
ray	Netherlands	traps	marine	estuaries, inshore coast	by-product of herring trap fishery	23
roach	Scandinavia	seine	freshwater	lakes	economically very important	187
roach	Scandinavia	seine	freshwater	lakes		187
ruffe	Netherlands	traps	freshwater			23
saithe	Scotland	long-lines	marine	offshore	daylight - seas hazardous at night	36, 69
saithe	Scotland	leisters	marine	shore	daylight - boats not used	36, 69
saithe	Scotland	traps	marine	shore	daylight - boats not used	36, 69
saithe	Scotland	nets	marine	shore	daylight - boats not used	36, 69
saithe	Scotland	dip net	marine	shore	daylight - boats not used	36, 69
saithe	Scotland	shore seine	marine	shallow/gently sloping shores		119
saithe	Scotland	baited lift net: circular frame	marine	inshore		119
saithe (small)	Orkney	set-line	marine	shore	line fixed to shore	34
saithe (small)	Orkney	dip-net	marine	shore	daylight - used when small saithe shoaling	34
salmon	Europe	tickling	freshwater	shallows/calm	night - artificial light lure - fish movement	154, 205
salmon	Europe	bow + arrow	freshwater	surface waters	daylight	205
salmon	Helmens	set nets (10-20m length)	freshwater	river mouth	salmon runs - set + hauled on ebb tide	185
salmon	Koryaks	set nets (10-20m length)	freshwater	river mouth	salmon runs - set + hauled on ebb tide	185
salmon	Anadyr River Eskimo	set nets (10-20m length)	freshwater	river mouth	salmon runs - set + hauled on ebb tide	185
salmon	Nirths	set nets (10-20m length)	freshwater	river mouth	salmon runs - set + hauled on ebb tide	185
salmon	Lower Amgun River Nedigals	set nets (10-20m length)	freshwater	river mouth	salmon runs - set + hauled on ebb tide	185
salmon	Oroches	set nets (10-20m length)	freshwater	river mouth	salmon runs - set + hauled on ebb tide	185
salmon	Ulches	set nets (10-20m length)	freshwater	river mouth	salmon runs - set + hauled on ebb tide	185
salmon	Oroks	set nets (10-20m length)	freshwater	river mouth	salmon runs - set + hauled on ebb tide	185
salmon	Helmens	shore seines from boats	freshwater	rivers	salmon runs	185

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
salmon	Koryaks	shore seines from boats	freshwater	rivers	salmon runs	185
salmon	Anadyr River Eskimo	shore seines from boats	freshwater	rivers	salmon runs	185
salmon	Nirths	shore seines from boats	freshwater	rivers	salmon runs	185
salmon	Lower Amgun River Nedigals	shore seines from boats	freshwater	rivers	salmon runs	185
salmon	Oroches	shore seines from boats	freshwater	rivers	salmon runs	185
salmon	Ulches	shore seines from boats	freshwater	rivers	salmon runs	185
salmon	Oroks	shore seines from boats	freshwater	rivers	salmon runs	185
salmon	Helmens	gaffs	freshwater	rivers	salmon runs	185
salmon	Koryaks	gaffs	freshwater	rivers	salmon runs	185
salmon	Anadyr River Eskimo	gaffs	freshwater	rivers	salmon runs	185
salmon	Nirths	gaffs	freshwater	rivers	salmon runs	185
salmon	Lower Amgun River Nedigals	gaffs	freshwater	rivers	salmon runs	185
salmon	Oroches	gaffs	freshwater	rivers	salmon runs	185
salmon	Ulches	gaffs	freshwater	rivers	salmon runs	185
salmon	Oroks	gaffs	freshwater	rivers	salmon runs	185
salmon	Kamchatka	weirs with traps/nets	freshwater	rivers	salmon runs - 1000 fish per day	168
salmon	Kamchatka	seines	freshwater	rivers	salmon runs - 32000 taken by 7 men in unfavourable year	168
salmon	England & Wales	weirs - putchers dip-nets	fresh to marine	tidal regions - fast flow		93, 95, 96
salmon	England & Wales	coop	fresh to marine	tidal regions		93, 95, 96
salmon	England & Wales	gaffs	freshwater	rivers	night (illegal)	93, 95, 96
salmon	England & Wales	leisters	freshwater	rivers		93, 95, 96
salmon	England & Wales	shore seines	fresh to marine	estuaries esp		93, 95, 96
salmon	England & Wales	push nets	fresh to marine	shallows		93, 95, 96
salmon	England & Wales	dip-nets	freshwater	muddy + estuaries	used from boats	93, 95, 96
salmon	Wales	clubs	freshwater	rivers	used to despatch fish after landing	93
salmon	Scandinavia	trap	freshwater	rivers	summer runs + returns after spawning	146, 68, 136
salmon	Scandinavia	seines	fresh to marine		summer runs	146, 68, 136
salmon	Scandinavia	dip nets	freshwater	surface/shallows	daylight when fish active - used over migration resting spots	146, 68, 136
salmon	Scandinavia	set nets	freshwater	shallow	used at spawning grounds	146, 68, 136
salmon	Scandinavia	leisters	freshwater	shallow	used at spawning grounds	146, 68, 136
salmon	Ireland	thrusting spear	fresh to marine	shallow bays/estuaries	day & night: torches	205
salmon	British Columbia coast	weir + dip-net/trap/spear	fresh to brackish	estuaries, rivers	generally in shallow water	110
salmon	British Columbia coast	spear	freshwater	surface/shallows		110
salmon	British Columbia coast	trolling	marine	bays + inlets	line tied to paddle	110
salmon	British Columbia coast	net	marine	reef fishing	daylight - reefs concentrate fish in channels	110
salmon	British Columbia coast	fly fishing	fresh to marine			110
salmon	Native North Americans	trolling	marine	deeper waters		151
salmon	Aleuts	net	fresh to marine	inshore + river		67
salmon	Aleuts	spear	marine	surface/shallows		67
salmon	Aleuts	leister	freshwater	river + shallows		67
salmon	Aleuts	weir + dip net	freshwater	river		67
salmon	Coast Yurok	gaff + bait	marine	inshore		101
salmon	Northwest Coast	weirs	fresh to marine	inshore/shallows		101
salmon	Northwest Coast	traps	fresh to marine			101

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
salmon	Hupa	box trap	freshwater	foot of rapids		101
salmon	Hupa	lift-nets from platform	freshwater	eddies	night - in waters that naturally concentrate fish	101
salmon	Karok	lift-nets from platform	freshwater	eddies	night - in waters that naturally concentrate fish	101
salmon	Yurok	lift-nets from platform	freshwater	eddies	night - in waters that naturally concentrate fish	101
salmon	Northwest Coast	seine	fresh to marine			101
salmon	Wiyot	barrier + dip net from boat	freshwater	shallow, smaller streams		101
salmon	Coast Yurok	weir + bag net	freshwater	shallow	takes salmon after spawning	101
salmon	Tolowa	double barrier + trap + club	freshwater	shallow		101
salmon	Northwest Coast	harpoon	freshwater	surface/shallows	takes salmon after spawning	101
salmon	Shasta	spear	freshwater	surface/shallows		101
salmon	Hupa	weir + dip net	freshwater	shallow		101
salmon	Hupa	gillnet	freshwater			101
salmon	Hupa	drift net	freshwater			101
salmon	Hupa	toggle head harpoon	freshwater	surface/shallows		101
salmon	Southern Kwakwaka'wakw	trolling	marine to brackish			99
salmon	Angoon Tlingit	hook	marine to brackish	bays + estuaries		103
salmon	McCloud River	leister/harpoon	freshwater	surface/shallows		151
salmon	Tlingit	weir + trap club	freshwater	shallow		103
salmon	Bella Coola	weir	freshwater	shallow		98
salmon	Tlingit	tidal weir	brackish	river mouth + estuaries		103
salmon	Southern Kwakwaka'wakw	trolled	marine	open waters		15
salmon	Haida	trolled	marine	open waters		15
salmon	Tlingit	trolled	marine	open waters		15
salmon	Makah	trolled	marine	open waters		15
salmon	Nootka	trolled	marine	open waters		15
salmon	Tsimshian	trolled	marine	open waters		15
salmon	Coast Salish	trolled	marine	open waters		15
salmon	S W Coast Salish	trolled	marine	open waters		15
salmon	North Coast Salish	trolled	marine	open waters		15
salmon	Northwest Coast	seine	marine	open waters		15
salmon	Northwest Coast	gillnet	marine	open waters		15
salmon	South Coast Salish	gaff	marine to brackish	bays, river mouth		103
salmon	South Coast Salish	seal harpoon	marine to brackish	bays, river mouth		103
salmon	Tlingit	funnel net	freshwater	river mouth	held open between two boats	103
salmon	Chinook	beach seine	freshwater	shore		44, 103
salmon	Nootka	harpoon	freshwater	surface/shallows	used as runs reduce	44, 103
salmon	Kwakwaka'wakw	harpoon	freshwater	surface/shallows		44, 103
salmon	Nootka	weir	freshwater	shallow		44, 103
salmon	Nootka	leister	freshwater	surface/shallows	used as runs reduce	44, 103
salmon	Makah	trawl net	freshwater	lake Ozette		44, 103
salmon	Central & South California	trap	freshwater		salmon returning downstream after spawning	161
salmon	Central & South California	snare	freshwater	surface/shallows		161
salmon	Central & South California	harpoon	freshwater	surface/shallows		60
salmon	Great Lakes	gillnet/fyke-net	freshwater	lake		191
salmon	Ainu	weir	freshwater	shallow streams	night - with or against current	200, 201, 202
salmon	Greenland Inuit	weir + scoop net	freshwater	rivers		122
salmon	Scandinavia	weir	freshwater	shallow	night - movement of fish - summer runs	146, 68, 136
salmon	Tlingit	gaff	freshwater	shallow/clear	used from river bank or boat	44, 103

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
salmon	Ainu	spear	freshwater	spawning grounds	night - used from dugout + torches	200, 201, 202
salmon	Ainu	spear	freshwater	rivers	used from peep huts in crepuscular periods	200, 201, 202
salmon	Ainu	trap	freshwater	spawning grounds		200, 202
salmon (cherry/Hucho)	Ainu	spear	freshwater	spawning grounds	day	200, 202
salmon (cherry)	Ainu	weir	freshwater	spawning grounds	weir with central bag net used in turbid water	200, 202
salmon (cherry)	Ainu	net	freshwater	spawning grounds	day	200, 202
salmon (cherry)	Ainu	rectangular bag net	freshwater	all regions of river	nets only used late in season - night when fish active	200, 202
salmon (dog)	Ainu	weir	freshwater	spawning grounds	night - weir with central bag net used in turbid water	200, 202
salmon (dog)	Ainu	rectangular bag net net	freshwater	all regions of river	nets only used late in season - night when fish active	200, 202
sandeel	Scandinavia	bottom-trawl	marine			130, 137
sandeel	Scotland	gaff	marine	inshore		117
sardine	Europe	drift-net	marine			39
sardine	Yurok	dip-net	marine	inshore	night	61
schooling spp.	Australian Aborigines	spear	marine to freshwater	estuaries + shallow inshore		47
schooling spp.	Australian Aborigines	tidal weirs	marine to freshwater	estuaries + tidal rivers		47
schooling spp.	Australian Aborigines	traps	brackish to freshwater	tidal + freshwater rivers		47
schooling spp.	Australian Aborigines	hand fishing	marine to freshwater	surface/shallows		47
schooling spp.	Australian Aborigines	brush barriers	marine to freshwater	shallow		47
sculpin	Nootka	hook	marine	inshore, rocky coast		103
sculpin	Nootka	gorge	marine	inshore, rocky coast		103
sculpin	South Coast Salish	gorge	marine	inshore		44, 103
sculpin	Inuit	hook	marine	inshore		216
shad	Great Lakes	gillnet/fyke-net	freshwater	lake		191
shad	West Africa	cast nets	freshwater	surface/shallows	used from dugouts	77
shark	Tikopia	hook	marine	deep waters		53
shark	Tikopia	snare	marine	deep waters		53
shrimp	Europe	lift-net	fresh to marine	rising tide		39
skate	Scandinavia	long-line	marine	deeper water		130, 137
skate	Maori	spear	marine	surface/shallows		14
small fish	Central & South California	barbless hook	freshwater			61
small fish	Washoe	basket scoops	freshwater	shallows		110
small fish	Huron	seine	freshwater	under ice		151, 190
small reef dwellers	Japan	hand-line	marine	rocky substrates	daylight - activity of fish + navigation	140, 88
small spp.	Chumash	nets	marine	shore		110
small spp.	Siberia	single-piece hook	fresh to marine			23
small spp.	Hupa	hook	freshwater			110
small spp.	Northwest Coast	self-spear	fresh to marine	inshore/shallows		110
small spp.	Yana	hook	freshwater			102
small spp.	Yana	snare	freshwater	surface/shallows		102
small spp.	Botel Tobago	small bag net	marine	shoreline	night	205
small spp.	Botel Tobago	Manari net	marine	shoreline	night	205
small spp.	Tikopia	scoop net	marine	shoreline		53
sole	Scandinavia	gillnet	marine			130, 137
sole	Scandinavia	bottom-trawl	marine			130, 137
sole	Scotland	small lines	marine	shore	daylight - boats not used	36, 69
sole	Netherlands	traps	marine	estuaries, inshore coast	by-product of herring trap fishery	23
sole	North Coast Salish	hand	marine	shallows/muddy		103
sole	North Coast Salish	hand	marine	shallows/muddy		103

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
sole	South Coast Salish	seine	marine	low tide, shore		103
steelhead	Tlingit	gaff	freshwater	shallow/clear	used from river bank or boat	44, 103
sterlet	Danube	multi-point hook	freshwater		common in 20th century	45
sterlet	Danube	tangle net	freshwater		19th century	45
sterlet	Danube	hook	freshwater			45
sterlet	Volga	trap	freshwater		pre-20th century	45
sterlet	Volga	tangle net	freshwater			45
stingray (up to 600lbs)	Maori	spear	marine	surface/shallows	spears made of hardwood	148
sturgeon	Danube	long-lines	freshwater	set on bottom	night - movement of fish	154
sturgeon	Danube	cylindrical trap	freshwater	river	traps lifted morning & evening	7, 8
sturgeon	Danube	wooden traps	freshwater	slow stretches of river		7, 8
sturgeon	Danube	long-line samolov barrier	freshwater	deeper water	most common:	45
sturgeon	Danube	weir	freshwater			45
sturgeon	Danube	net	freshwater			45
sturgeon	Danube	harpoon	freshwater			45
sturgeon	Danube	club + gaff	freshwater	surface/shallows		45
sturgeon	Ainu	long-line samolov	freshwater	rivers		45
sturgeon	Fraser River	harpoon	freshwater	surface/shallows		23
sturgeon	Black Sea	floated long-line	marine	deeper water		23
sturgeon	Caspian Sea	floated long-line	marine	deeper water		23
sturgeon	Northwest Coast	riding	freshwater			101
sturgeon	Hupa	lift-nets from platform	freshwater	eddies	night - in waters that naturally concentrate fish	101
sturgeon	Karok	lift-nets from platform	freshwater	eddies	night - in waters that naturally concentrate fish	101
sturgeon	Yurok	lift-nets from platform	freshwater	eddies	night - in waters that naturally concentrate fish	101
sturgeon	Northwest Coast	seine				101
sturgeon	Hupa	weir + dip net	freshwater	shallow		101
sturgeon	Hupa	gillnet	freshwater			101
sturgeon	Hupa	drift net	freshwater			101
sturgeon	Hupa	toggle head harpoon	freshwater	surface/shallows		101
sturgeon	Northwest Coast	snare	freshwater	surface/shallows		170
sturgeon	South Coast Salish	gaff	marine to brackish	bays, river mouth		103
sturgeon	South Coast Salish	seal harpoon	marine to brackish	bays, river mouth		103
sturgeon	Chinook	gaff	marine to brackish	bays, river mouth	gaff has detachable hook	103
sturgeon	Coast Salish	trawl net	freshwater			103
sturgeon	Huron	hook	freshwater			151, 190
sturgeon	Huron	set net	freshwater	Lake Huron		151, 190
sturgeon	Great Lakes	spear	freshwater	lake	used in open water and under ice	31, 157
sturgeon	Great Lakes	gillnet/fyke-net	freshwater	lake	lake sturgeon up to 300lbs	191
sturgeon	Great Lakes	harpoon	freshwater	lake, clear water		31
sturgeon	Misitassini	net	freshwater			155
sturgeon	Misitassini	spear	freshwater	surface/shallows		155
sturgeon	Russia	hook - samolov	freshwater			45
sturgeon (large)	Chinook	trolling	marine to brackish	deeper water		151
surf fish	Northwest Coast	scoop net	marine	sandy beach		101
surf fish	Japan	spear	marine	shallows		139
tench	Europe	tickling	freshwater	shallows/calm	daylight	154, 205
trout	Europe	tickling	freshwater	shallows/calm	daylight	154, 205
trout	England & Wales	push nets	fresh to marine	surface/shallows		93, 95, 96
trout	Jad River, Transylvania	spear	freshwater	all reaches of river		70
trout	Ireland	gaff	freshwater	shore		56
trout	British Columbia coast	fly fishing	fresh to marine			56
trout	Aleuts	net	fresh to marine	inshore + river		67

Table 3.2a (contd)

Fish Species	Location	Fishing Technique	Water Location	Water Conditions	Comments	Refs
trout	Tlingit	hook	marine brackish			44
trout	Bella Coola	leister	freshwater	surface/shallows		98
trout	Bella Coola	gaff	freshwater	surface/shallows		98
trout	Eyak	hook	marine to brackish			15
trout	Huron	hook	freshwater			151, 190
trout	Huron	set net	freshwater	Lake Huron		151, 190
trout	Great Lakes	spear	freshwater	lake	used in open water and under ice	31, 157
trout	Great Lakes	gillnet/fyke-net	freshwater	lake		191
trout	Ainu	weir	freshwater	tributaries	weir with central bag net used in turbid water	200, 202
trout	Misitassini	trawls	freshwater			155
trout	Misitassini	set lines	freshwater			155
tuna	Japan	trolling	marine	inshore-offshore		139
tuna	Japan	net	marine	inshore-offshore		139
turbot	North Sea Coast	hand fishing	marine	shallows	fish located with feet at low tide	154, 205
turbot	Scandinavia	gillnet	marine			130, 137
various	Nile	gaff	freshwater	flood waters	night - torches	207
various	Niger	harpoon	freshwater	flood waters	day & night - torches	207
various	Australian Aborigines	poisons	marine	tidal pools	low tide	58
various	Inuit	net	marine	inshore	fished by women/children/elderly	173
various	Inuit	spear - barbed	marine	inshore	fished by women/children/elderly	173
various	Inuit	harpoon	marine	inshore	fished by women/children/elderly	173
various	Inuit	hook	marine	inshore	fished by women/children/elderly	173
wels	Danube	cylindrical trap	freshwater	river	traps lifted morning & evening	7, 8
wels	Danube	multi-point hook	freshwater			45
wels	Danube	hook	freshwater			45
wels	Russia	hook - samolov	freshwater			45
whitefish	Native North Americans	net	freshwater			151
whitefish	Eyak	hook	freshwater			15
whitefish	Inuit	hook	freshwater			216
whitefish	Inuit	dip-nets	freshwater			216
whitefish (large)	Inuit	leister	freshwater			216
whitefish	Coast Salish	trawl net	freshwater			103
whitefish	Huron	set net	freshwater	Lake Huron		151, 190
whitefish	Great Lakes	gillnet/fyke-net	freshwater	lake	taken in greatest quantities when closest to shore	191
whiting	North Sea	long-lines	marine	inshore + offshore	night - feeding patterns	176
whiting	Scotland	long-lines	marine	offshore	daylight - seas hazardous at night	36, 69, 109
whiting	Scotland	leisters	marine	shore	daylight - boats not used	36, 69
whiting	Scotland	traps	marine	shore	daylight - boats not used	36, 69
whiting	Scotland	nets	marine	shore	daylight - boats not used	36, 69
wolf-fish	Inuit	hook	marine	offshore		216
~	Huron	net	freshwater	lakes & rivers		151, 190

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Table 3.3 - Ethnographically Observed Uses of Fish and Fish Products

Location	Resource	Product	Use
Lofoten Islanders	fish	skin	window coverings
Amur	fish	skin	clothing & footwear
Yukagirs	fish	boiled intestines	used for skin softening
Ireland	basking shark	liver oil	food, fuel
E Siberia	burbot	tanned skin	clothing
England	burbot	skin	window pane repairs, rope, sacks
Samoyeds	burbot	skin	storage sacks, child carriers
Iceland	catfish	tanned skin	footwear
Norway	catfish	tanned skin	footwear
Scotland	cod	liver oil	food, fuel, dressing skins, medicinal properties
Native American groups	cod	skin	glues
Scandinavia	cod	skin	glues
Europe	cod	liver oil	fuel, dressing leather, food
Coastal Ainu	cod	liver oil	used as bait for fishing
Europe	dogfish	skin	sandpaper
Scandinavia	eel	tanned skin	rope, binding cord, sacks, clothing: belts, shoelaces
England	eel	tanned skin	rope, binding cord, sacks, clothing: belts, shoelaces
England	eel	skin	medicinal properties
British Columbia Coast	eulachon	oil	food, fuel
South Kwakwilt	eulachon	oil	food, fuel
Tlingit	eulachon	oil	fish fermented for 2 weeks prior to rendering oil
Tlingit	fish	oil	lamp fuel, food
Huron	fish		glue used for composite implements e.g. arrowheads
Coastal Ainu	herring	oil	lamp fuel
Scotland	ling	liver oil	food, fuel
Europe	Mediterranean moray	skin	leather
Yenisei (Kets)	pike	skin	storage sacks
Amazon	pirarucu	scales	files/sandpaper
Faroës	porbeagle	tanned skin	footwear
Faroës	ray	tanned skin	aprons, trousers
Japan	ray	skin	leather for prestige objects, weapon grips
Scotland	saithe	liver oil	food, fuel, dressing skins
Lapps	salmon	tanned skin	caps
East Siberia	salmon	tanned skin	clothing
Samoyeds	salmon	skin	storage sacks
Chinook	salmon	skin	waterproof basket linings for storage purposes
Central & South California	salmon	oil	fuel
Coastal Ainu	salmon	skins	clothing, shoes, bags
Polynesians	shark	teeth	incorporated into weapons
Melanesians	shark	teeth	incorporated into weapons
Micronesians	shark	teeth	incorporated into weapons
Polynesians	shark	skin	drum covering
Melanesians	shark	skin	drum covering
Micronesians	shark	skin	drum covering
Inuit	shark	teeth	incorporated into weapons
Gilbert Islanders	shark	teeth	incorporated into weapons
Hawaiians	shark	teeth	incorporated into weapons
South America	shark	teeth	incorporated into weapons
Coastal Ainu	shark	oil	meat not consumed
Scotland	spurdog	liver oil	food, fuel, dressing skins
Europe	spurdog	skin	sandpaper
Europe	spurdog	skin	leather
Australian Aborigines	stingray	tail spine	incorporated into weapons
Native American groups	sturgeon	head & neck glands	glues
Lapps	sturgeon	skin	clothing & storage vessels
Ostyaks	sturgeon	skin	clothing & storage vessels
Danube	sturgeon	skin	leather
Danube	sturgeon	air bladder	isinglass
Ostyaks (Khants)	sturgeon	skin	storage sacks for dried fish
Hupa	sturgeon	head	glues
Europe	tench	skin slime	medicinal properties
Europe	tope	oil	food, fuel
Coastal Ainu	trout	skins	clothing, shoes, bags

refs: - Rau 1885; Gifford 1939; Curwin 1941; Went 1952, 1984; Kvaase 1956; Netboy 1958; Kroeber & Barrett 1960-62; de Rohan Csermak 1963; Tooker 1964; McKervill 1967; Norland 1969; Jangaard 1969; Ohnuki-Tierney 1974; Taksami 1975; Gray 1978; Smith 1981; Berg 1984; Whitehead et al 1986; Kirk 1986; Walker 1988; Suttles 1990b; Silverstein 1990; Martin 1995; Coull 1996; Tricas et al 1997; Zaliznyak 1997

Table 4.1 - Mode of Capture

Method of Capture	Fishing Gear	
	Active	Passive
Encircling	Seine, trawl, cast net, lift net, scoop net	
Entangling		Gill net, trammel net, drift net
Entrapment	Hoop net, snare, clap net	Weir, enclosure, barrier, trap, fyke, pot
Hook and Line	Hand line, long line, troll line, gorge, bobbing	Set line, long line
Impaling	Spear, harpoon, bow & arrow, gaff, club	
Miscellaneous	Poisons, hand fishing, suffocation, drives	
Shellfish Gear	Rake, shucking implement	

Table 4.2 - Potential Yield (or Scale) of Fishing Gear

Method of Capture	Large Scale Fishing	Small Scale Fishing
Nets: seine, trawl, gill net, trammel net, fyke	♦	
Nets: cast net, lift net, clap net	♦	♦
Nets: scoop net, hoop net		♦
Traps: snare, trap, pot		♦
Weir, enclosure, barrier, traps set in weirs	♦	
Spear, harpoon, bow & arrow, gaff, club		♦
Poison, suffocation, drives	♦	
Hand fishing		♦
Long line	♦	
Hand lines, single hook lines, bobbing, gorge		♦

Table 4.3 - Archaeological Correlates of Fishing Gear under Varying Preservation Conditions

Fishing Gear	No organic preservation	Preservation conditions favourable for bone	Waterlogged conditions
Nets: seines trawls, gill nets, trammel nets, drift nets, fykes	Net sinkers	Nets sinkers	Net fragments, wooden/bark floats, net sinkers
Nets: cast nets	Net sinkers	Net sinkers	Net fragments, net sinkers
Nets: hoop nets, scoop nets, lift nets, clap nets			Net fragments, wooden net frames
Weirs	Anchor stones for traps, post holes *, stone foundations	Anchor stones for traps, post holes, stone foundations	Posts, fencing, basketry or netting from traps
Enclosures, barriers	Post holes, stone foundations	Post holes, stone foundations	Posts, fencing
Traps	Anchor stones	Anchor stones	Basketry/netting
Hook & line	Stone hook shanks, stone lures	Stone hook shanks, stone lures, bone hooks, bone points, bone lures	Stone hook shanks, bone hooks, bone points, line fragments, rod fragments, lures
Gorges	Stone points	Stone points, bone points	Stone points, bone points, wooden points, line fragments

Table 4.3 (contd)

Fishing Gear	No organic preservation	Preservation conditions favourable for bone	Waterlogged conditions
Spear, Harpoon	Stone insets	Stone insets, bone points, barbed bone points	Stone insets, bone points, barbed bone points, wooden shaft, bone points, barbed bone points, line fragments, skin floats
Bow & arrow	Stone arrowheads	Stone arrowheads, bone points	Stone arrowheads, bone points, line fragments, wooden shaft
Shellfish Gear	Stone shucking implements	Stone & bone shucking implements, bone points from rakes	Stone & bone shucking implements, bone points from rakes, wooden shafts from rakes
Watercraft	Anchor stones	Anchor stones	Anchor stones, dugouts, bark, skins, boat frames, bailers, paddles
Poisons, hand fishing, suffocation, drives			Strips of cloth, indirect plant macro evidence
Snares			Snare line

*post hole would only be found if the structure was substantial enough to require embedding in the substrate.

(cf. Table 1 Colley 1986)

Table 4.4 - The use of Fishing Gear: Target Species and Hydrological Conditions

Gear Type	Conditions of Use	Prey
Bow & Arrow	Clear shallow water	Large individuals Surface feeders
Passive Nets	Various water depths	Limited size range Motile species
Active Nets	Various water depths	All sizes greater than mesh Various species
Trap	Various water depths Not very soft substrates	All sizes Thigmotaxic species
Chambered Trap	Various water depths	Small & Medium Individuals
Weir/Barrier	Shallow water Aligned to current	All sizes Motile species
Hand Collection	Shallow water	All sizes
Hook & Line/Long-Line	Not dense vegetation Not rough substrates Various water depths	Non-filter feeders
Circular hooks	Various water depths	Species that suck in food Large individuals in shallows
Jabbing hooks	Various water depths	Species that nibble food Shallow water or Trolling deeper water
Snare	Shallow clear, water	Large individuals
Gorge	Various water depths	Large individuals Non-filter feeders
Spear/Harpoon	Shallow, clear water Surface feeders	Large individuals

Table 4.5 – Conventional Views on Gear Selectivity Patterns

Gear Type	Selectivity Pattern	Selectivity
Gillnet	Species – Age/Size – Sex	High
Nets (others)	Age/Size	Medium
Chambered Trap	Age/Size	Medium
Bow & Arrow	Species – Age/Size	High
Hook & Line	Species – Age/Size	High
Snare	Species – Age/Size	High
Weir/Barrier	Non-Selective	Low
Trap	Non-Selective	Low
Gorge	Species – Age/Size	High
Hand Collection	Species – Age/Size	High
Spear/Harpoon	Species – Age/Size	High
Poison	Non-Selective	Low

Table 5.1 - General Factors Influencing Fish Capture & Gear Choice

Fish	Cause	Factor	Effect on Fishing
predators	high visual acuity	need to reduce visibility of gear	fished in crepuscular periods or at night
predators - temperate water species	feeding method	inhale prey	particularly vulnerable to hook fishing
all species	distribution + concentration	efficiency of fishing	fished in most vulnerable seasons
shoaling species	concentrated in day; dispersed at night	efficiency of fishing	day fishing with encircling gear
solitary species - usually predators	dispersed at all times	efficiency of fishing	large individuals taken with small-scale gear
herbivorous species	feeding preference	unlikely to respond to bait	not taken with hooks
Atlantic species	feeding behaviour	diurnal migration	vulnerable in crepuscular periods
temperate species	winter reduction in metabolism	reduction or cessation of activity	requires active gear
all species	spawning	reduction or cessation of feeding	not responsive to baited gear - active gear required
freshwater predators	concentrate in groups at lake outlets	food washed out from lakes	can be taken with large scale gear
anadromous/ catadromous species	spatial + temporal concentration	efficiency of fishing	large scale gear
freshwater species	auditory acuity + developed lateral line	efficiency of fishing	can detect & avoid passive gear
fast swimming pelagic species	developed lateral line	efficiency of fishing	can detect & avoid passive gear
migratory species	olfactory acuity	efficiency of fishing	sensitive to chemical lures: avoids unnatural smelling gear
all species	feeding	efficiency of fishing	less suspicious of gear + bait

Table 5.2 - Fish Biology and Ecology -
Species Identified at Mesolithic Sites

Species	Family	Size	Weight
Allis Shad <i>Alosa alosa</i>	Clupeidae	max 76cm av. 30-50cm	max 2.7kg av 0.7kg
Atlantic Horse Mackerel <i>Trachurus trachurus</i>	Clupeidae	max 70cm av. 30-40m	max 2kg av 0.85kg
Asp <i>Aspius aspius</i>	Cyprinidae	max 100cm av 40-60cm	max 9kg av 5kg
Ballan Wrasse <i>Labrus bergylta</i>	Labridae	max 60cm	max 4.35kg
Sea Bass <i>Dicentrarchus labrax</i>	Moronidae	max 100m av 60cm	max 12kg
Barbel <i>Barbus barbus</i>	Cyprinidae	max 1.20m av 30-50cm	max 12kg av 2.55kg
Beluga <i>Huso huso</i>	Acipenseridae	max 5m	max 2072kg av 102kg
Black Goby <i>Gobius niger</i>	Gobiidae	max 18cm	
Black Sea Roach <i>Rutilus frisii</i>	Cyprinidae	up to 70cm	
Black Seabream <i>Spondylusoma cantharus</i>	Sparidae	max 60cm av 35cm	max 3kg
Blenny	Blenniidae		
Bluefin Tuna <i>Thunnus thynnus</i>	Scombridae	max 4.85m av 3.0mm	max 710kg
Bogue <i>Boops boops</i>	Sparidae	up to 36cm	
Bonito <i>Sarda sarda</i>	Scombridae	max 91cm	max 11kg av 8.3kg
Common Bream <i>Abramis brama</i>	Cyprinidae	max 80cm av 30-50cm	max 11.5kg av 0.5-3.6kg
Brill <i>Scophthalmus rhombus</i>	Scophthalmidae	max 75cm av 50cm	max 8kg av 2.3-3.6kg
Greater Pipefish <i>Syngnathus acus</i>	Syngnathidae	up to 46cm	
Bullrout <i>Myoxocephalus scorpius</i>	Cottidae	max 90cm	
Carp <i>Cyprinus carpio</i>	Cyprinidae	max >1m av 50-60cm	max 34.35kg av 1.8-4.5kg
Chub <i>Leuciscus cephalus</i>	Cyprinidae	max 61cm av 30-50cm	max 8kg av 2.7kg
Cod <i>Gadus morhua</i>	Gadidae	max 2.0m av 1.2m	max 96kg av 11kg
Common Seabream <i>Diplodus vulgaris</i>	Sparidae	max 45cm	max 1.3kg
Atlantic Sturgeon <i>Acipenser oxyrinchus</i>	Acipenseridae	max 4.03m (male) max 4.30m (female)	max 368kg
Sturgeon <i>Acipenser sturio</i>	Acipenseridae	max 6.0m (male) max 2.2m (female)	max 400kg (male) max 120kg (female)
Conger <i>Conger conger</i>	Congidae	max 3.05m	max 110kg
Couch's Seabream <i>Pagrus pagrus</i>	Sparidae	av 91cm	av 7.72kg
Crucian carp <i>Carassius carassius</i>	Cyprinidae	max 64cm av 15cm	max 3.2kg av 170g
Cuckoo Wrasse <i>Labrus mixtus</i>	Labridae	max 40cm (male) max 30cm (female)	max 1.2kg av 0.3kg
Cyprinids	Cyprinidae		
Dab <i>Limanda limanda</i>	Pleuronectidae	max 42cm up to 25cm	max 1.4kg av 200-350g

Table 5.2 (contd)

Species	Family	Size	Weight
Dentex <i>Dentex dentex</i>	Sparidae	max 1.2m	max 15kg av 9.8kg
Dragonet <i>Callionymus lyra</i>	Callionymidae	max 30cm (male) max 25cm (female)	
Drum	Sciaenidae		
Dusky Perch/Grouper ? <i>Epinephelus marginatus</i>	Serranidae	max 1.5m	max 60kg
Eagle Ray <i>Myliobatis aquila</i>	Myliobatidae	max 2m 83cm wide	max 24kg
Eel <i>Anguilla anguilla</i>	Anguillidae	up to 1m males smaller	max 12.7kg av 4.5kg
Fifteen-spined Stickleback <i>Spinachia spinachia</i>	Gasterosteidae	max 22cm av 15cm	
Flatfish	Pleuronectidae		
Flounder <i>Platichthys flesus</i>	Pleuronectidae	max 60cm	max 14kg
Four-horned Sculpin <i>Triglopsis quadricornis</i>	Cottidae	max 60cm	max 0.26kg
Gadids	Gadidae		
Garfish <i>Belone belone</i>	Belonidae	max 94cm	max 1.4kg av 340-395g
Gilthead <i>Sparus auratus</i>	Sparidae	max 70cm	max 18kg
Gobiids	Gobiidae		
Golden Redfish <i>Sebastes marinus</i>	Sebastidae	max 100cm	max 15kg
Grayling <i>Thymallus thymallus</i>	Salmonidae	max 60cm	max 6.7kg av 2.3kg
Greater Weever <i>Trachinus draco</i>	Trachinidae	max 45cm av 0.45kg	max 1.86kg
Grey Gurnard <i>Chelidonichthys gurnardus</i>	Triglidae	max 60cm av 30cm	max 1.2kg
Grey Mullet	Mugilidae		
Gurnard	Triglidae		
Haddock <i>Melanogrammus aeglefinus</i>	Gadidae	max 112cm av 38-64cm	max 16.76kg av 4.53kg
Hake <i>Merluccius merluccius</i>	Merlucciidae	max (male) 1.8m max (female) 1m	max 15kg av 5kg
Halibut <i>Hippoglossus hippoglossus</i>	Pleuronectidae	max (male) 2.45m max (female) 3.0m	max 316kg av 116kg
Herring <i>Clupea harengus</i>	Clupeidae	max 45cm av 24cm	max 1.05kg av 480g
Huchen <i>Hucho hucho</i>	Salmonidae	max 2.0m av 70cm	max 100kg av 35kg
Ide <i>Leuciscus idus</i>	Cyprinidae	max 1m av 30-43cm	max 8kg av 0.7-1.2kg
Ling <i>Molva molva</i>	Lotidae	max 220cm av 1-1.5m	max 45kg
Long Rough Dab <i>Hippoglossoides platessoides</i>	Pleuronectidae	max 82cm	max 6.4kg
Mackerel <i>Scomber scombrus</i>	Clupeidae	max 66cm av 40.6cm	max 3.3kg av 680g
Meagre <i>Argyrosomus regius</i>	Sciaenidae	max 2.3m	max 103kg
Mediterranean Moray <i>Muraena helena</i>	Muraenidae	max 150cm	
Perch <i>Perca fluviatilis</i>	Percidae	max 51cm av 35cm	max 4.75kg av 1.2kg
Zander <i>Stizostedion lucioperca</i>	Percidae	max 130cm av 60cm	max 15kg
Pike-Perch		slender form of zander	

Table 5.2 (contd)

Species	Family	Size	Weight
Pike <i>Esox lucius</i>	Esocidae	max 1.5m	35kg
Pilchard <i>Sardina pilchardus</i>	Clupeidae	up to 28cm	
Pipefish	Syngnathidae		
Plaice <i>Pleuronectes platessus</i>	Pleuronectidae	max 1.0m av 50cm	max 7kg av 1.1kg
Pollack <i>Pollachius pollachius</i>	Gadidae	max 130cm av 50cm	max 19kg av 4kg
Porbeagle <i>Lamna nasus</i>	Lamnidae	max 3.5m av 1.8-2.4m	max 227kg av 23kg
Ray	Rajidae		
Red Scorpionfish <i>Scorpaena scrofa</i>	Scorpaenidae	max 50cm	max 2.96kg
Redfish <i>Sebastes</i> sp	Sebastidae		
Roach <i>Rutilus rutilus</i>	Cyprinidae	max 53cm av 25-35cm	2.0kg av 0.2-1kg
Rudd <i>Scardinius erythrophthalmus</i>	Cyprinidae	max 51cm av 30cm	max 2.097kg av 0.8kg
Ruffe <i>Gymnocephalus cernua</i>	Cyprinidae	max 25cm	max 0.4kg
Russian Sturgeon <i>Acipenser gueldenstaedtii</i>	Acipenseridae	max 2.35m	max 115kg
Saithe <i>Pollachius virens</i>	Gadidae	max 130cm av 70-80cm	max 32kg av 2.3kg
Salema <i>Sarpa salpa</i>	Sparidae	max 51cm	
Salmon <i>Salmo salar</i>	Salmonidae	max 36kg av 2.2-2.7kg	max 1.5m
Salmonids	Salmonidae		
Sandeel	Ammodytidae		
Sea Breams	Sparidae		
Sea Perch/Grouper	Serranidae		
Shad <i>Alosa</i> sp	Clupeidae		
Shanny <i>Lipophrys pholis</i>	Blenniidae	max 30cm	
Shark	Selachimorphs		
Silver Bream <i>Abramis bjoerkna</i>	Cyprinidae	max 36cm	max 1kg
Skate <i>Raja batis</i>	Rajidae	max 285cm	max 98kg
Smelt <i>Osmeridae</i>	Osmeridae	max 45cm	
Smooth-hound <i>Mustelus mustelus</i>	Triakidae	max 2.0m av 1-1.2m	
Sole <i>Solea solea</i>	Soleidae	max 70cm	max 3kg
Spanish mackerel <i>Scomber japonicus</i>	Scombridae	max 64m	max 2.9kg
Spanish Seabream <i>Pagellus acarne</i>	Sparidae	max 36cm	
Spurdog <i>Squalus acanthias</i>	Squalidae	max (female) 160cm max (male) 90cm	max 9.1kg av 6.3-6.8kg
Sterlet <i>Acipenser ruthenus</i>	Acipenseridae	max 1.25m av 35-40cm	max 15.8kg
Stickleback	Gasterosteiformes		

Table 5.2 (contd)

Species	Family	Size	Weight
Stingray	Dasyatidae		
Common Stingray <i>Dasyatis pastinaca</i>	Dasyatidae	max 60cm wide	
Swordfish <i>Xiphias gladius</i>	Xiphiidae	max 450cm	max 650kg
Tench <i>Tinca tinca</i>	Cyprinidae	max 84cm	max 8kg av 4.64kg
Thornback Ray <i>Raja clavata</i>	Rajidae	max 1.01 (male) max 1.20m (female)	max 18kg av 7.59kg
Three-spined Stickleback <i>Gasterosteus aculeatus</i>	Gasterosteidae	max 11.5cm (marine) max 8cm (freshwater) av 5.1cm	
Tope <i>Galeorhinus galeus</i>	Triakidae	max 210cm av 120cm	max 45kg
Torsk <i>Brosme brosme</i>	Lotidae	max 1.20m av 50cm	max 30kg
Trout <i>Salmo trutta</i>	Salmonidae	max 1.4m	max 50kg av 2.3-2.7kg
Tub Gurnard <i>Chelidonichthys lucerna</i>	Triglidae	max 75cm av 50-60cm	max 6kg av 5.2kg
Tuna	Scombridae		
Turbot <i>Scophthalmus maximus</i>	Scophthalmidae	max 1m av 50-80cm	max 25kg av 5-12kg
Viviparous Blenny <i>Zoarces viviparus</i>	Zoarcidae	max 52cm	max 0.51kg
Catfish/Wels <i>Silurus glanis</i>	Siluridae	max 5m av 1m	max 306kg av 10kg
Whitefish <i>Coregonus</i> sp.	Salmonidae		
Whiting <i>Merlangius merlangius</i>	Gadidae	max 70cm av 30-40cm	max 3.11kg
Wolf-fish <i>Anarhichas lupus</i>	Anarhichadidae	max 1.50m	max 23.58kg
Wrasse	Labridae	usually <30cm	

Table 5.2 (contd)

Species	European Distribution	Habitat
Allis Shad <i>Alosa alosa</i>	coastal Europe	inshore-200m shallow coastal waters & estuaries
Atlantic Horse Mackerel <i>Trachurus trachurus</i>	European Seas	pelagic, inshore - 600m favours inshore sandy substrate
Asp <i>Aspius aspius</i>	East Europe	fresh & brackish water, prefers lower reaches of rivers benthopelagic, deep fast currents in vegetated regions
Ballan Wrasse <i>Labrus bergylta</i>	coastal Europe	reefs/kelp bed associated, inshore-50m marine, coarse substrates
Sea Bass <i>Dicentrarchus labrax</i>	coastal Europe	demersal, inshore-200m, reefs marine, brackish & freshwater
Barbel <i>Barbus barbus</i>	mid Europe	benthopelagic, freshwater - upper reaches of rivers fast clear water over gravels
Beluga <i>Huso huso</i>	East Europe	anadromous freshwater - main flow marine, demersal - 70-180m
Black Goby <i>Gobius niger</i>	coastal Europe	demersal 2-70m, mud/sand substrate marine & brackish, in sea grass or over algae
Black Sea Roach <i>Rutilus frisii</i>	Eastern Europe	lakes, slow rivers bottom feeding
Black Seabream <i>Spondylusoma cantharus</i>	coastal Europe	benthopelagic, inshore-300m sea grass over rock/sand substrate
Blenny	coastal + inland Europe 23 species	shallows, benthic freshwater blenny - S Europe
Bluefin Tuna <i>Thunnus thynnus</i>	mid-South Europe	pelagic, ocean
Bogue <i>Boops boops</i>	coastal Europe from South Scandinavia	demersal, marine, inshore-350m sand/mud/rock substrate with seaweed
Bonito <i>Sarda sarda</i>	Britain & South Europe coast	pelagic, inshore-200m marine & brackish
Common Bream <i>Abramis brama</i>	Europe	benthopelagic, stagnant slow lowland rivers, lakes & ponds clay/mud substrate fresh & brackish waters
Brill <i>Scopthalmus rhombus</i>	coastal Europe	demersal, marine, sand substrate 9-73m young inshore
Greater Pipefish <i>Syngnathus acus</i>	coastal Europe	demersal, inshore-20m, marine & brackish coarse-muddy ground or weeds/sea grass (<i>Zostera</i>)
Bullrout <i>Myoxocephalus scorpius</i>	coastal North Europe	inshore-110m, intertidal on cool shores range of substrates in seaweed
Carp <i>Cyprinus carpio</i>	Europe	benthopelagic, lowland lakes & rivers, fresh & brackish dense vegetation slow/stagnant muddy water
Chub <i>Leuciscus cephalus</i>	Europe	middle reaches rivers, large lakes benthopelagic, fresh & brackish
Cod <i>Gadus morhua</i>	coastal/offshore North Europe	shoreline to 200m, occasionally to 600m benthopelagic, marine & brackish young inshore - summer large cod - inshore to feed on shoals of fatty species overwinter - deep water of estuaries: kelp beds
Common Seabream <i>Diplodus vulgaris</i>	South Europe & Mediterranean coast	benthopelagic, inshore-160m rock/gravel/sand substrates
Atlantic Sturgeon <i>Acipenser oxyrinchus</i>	Atlantic coast Europe	shallow coastal water, inshore-46m demersal, fresh, brackish & marine
Sturgeon <i>Acipenser sturio</i>	Europe	coastal - inshore (20-50m) freshwater - midwater, main flow demersal, fresh, brackish & marine
Conger <i>Conger conger</i>	coastal Europe	demersal, rocky/coarse shores, slack water + lairs intertidal-500m
Couch's Seabream <i>Pagrus pagrus</i>	South Europe	benthopelagic, marine, inshore-250m rock/gravel/sand substrates
Crucian carp <i>Carassius carassius</i>	mid Europe	demersal, fresh & brackish, to 5m stagnant slow ponds, lakes, rivers in dense vegetation
Cuckoo Wrasse <i>Labrus mixtus</i>	Atlantic coast rare in North	reef associated, rock/coarse substrates shore-200m, generally 35-180m
Cyprinids	Europe	freshwater, brackish typically mid-water
Dab <i>Limanda limanda</i>	North Europe	shore to 150m, usually 20-40m marine & occasionally brackish

Table 5.2 (contd)

Species	European Distribution	Habitat
Dentex <i>Dentex dentex</i>	South coastal Europe & Mediterranean	benthopelagic, inshore-200m rock substrates
Dragonet <i>Callionymus lyra</i>	coastal Europe 7 species	sand/mud substrate, sublittoral-200m demersal
Drum	coastal South Europe 4 species	inshore - 200m
Dusky Perch/Grouper ? <i>Epinephelus marginatus</i>	South coastal Europe & Mediterranean	reef dwelling, coarse substrates subtropical
Eagle Ray <i>Myliobatis aquila</i>	South coastal Europe & Mediterranean	shore-300m, benthopelagic lagoons, bays, estuaries, sand/mud substrate
Eel <i>Anguilla anguilla</i>	Europe	elvers + brown eel - freshwater mature eel - fresh-marine females larger + further upstream common in estuaries: never in slack waters
Fifteen-spined Stickleback <i>Spinachia spinachia</i>	coastal North Europe	benthopelagic, marine & brackish shallows & tidal pools vegetated regions
Flatfish		
Flounder <i>Platichthys flesus</i>	coastal Europe	demersal, tide-100m marine, brackish & freshwater buries into sand/mud substrate
Four-horned Sculpin <i>Trigloporus quadricornis</i>	North Europe	demersal, shore-100m, soft substrates marine, brackish & freshwater (up to 120 miles inland)
Gadids	Atlantic & coastal Europe	marine, 30 species in N Europe
Garfish <i>Belone belone</i>	coastal North Europe	surface pelagic, inshore-oceans young inshore - summer
Gilthead <i>Sparus auratus</i>	South coastal Europe	demersal, shallows - 30m marine, brackish & freshwater over sand/mud substrate
Gobiids	various habitats 18 species	inshore - supralittoral zone
Golden Redfish <i>Sebastes marinus</i>	North Europe	pelagic, 100-1000m young inshore
Grayling <i>Thymallus thymallus</i>	North-mid Europe	benthopelagic, prefers fast waters of upper reaches of rivers fresh & brackish (Baltic), sand/gravel substrates
Greater Weever <i>Trachinus draco</i>	coastal Europe	marine, 3-150m in north demersal, buries into sand/mud/gravel substrates
Grey Gurnard <i>Chelidonichthys gurnardus</i>	coastal Europe	demersal, inshore-150m, marine & brackish sandy/mud/rock substrate
Grey Mullet	coastal Europe 5 species	inshore, estuarine, rocky substrates thick-tipped common inshore
Gurnard	coastal Europe	7 species- varying habitat
Haddock <i>Melanogrammus aeglefinus</i>	North coastal Europe	demersal, 80-200m, occasionally 10-450m marine rock/sand/gravel substrate
Hake <i>Merluccius merluccius</i>	coastal Europe	offshore 70-400m, occasionally 30-1000m demersal
Halibut <i>Hippoglossus hippoglossus</i>	North Europe	demersal (occasionally pelagic), 50-2000m
Herring <i>Clupea harengus</i>	coastal/seas Europe	pelagic, inshore-200m diurnal migration, bottom in day, surface at night
Huchen <i>Hucho hucho</i>	Danube basin	freshwater, deep water of swift flowing rivers/streams
Ide <i>Leuciscus idus</i>	North-mid Europe	lowland slow rivers, lakes fresh-brackish water water depth 0-15m
Ling <i>Molva molva</i>	North coastal Europe	offshore 100-400m, occasionally 15-600m over rock young more inshore demersal, rocky substrate
Long Rough Dab <i>Hippoglossoides platessoides</i>	North-mid coastal Europe	demersal, soft substrates, 10-400m (generally 90-250m) more offshore in warmer waters
Mackerel <i>Scomber scombrus</i>	North Atlantic	over Continental shelf - surface young inshore
Meagre <i>Argyrosomus regius</i>	coastal Europe & Mediterranean	shallows-200m, benthopelagic, sand substrate marine & estuaries
Mediterranean Moray <i>Muraena helena</i>	mid-South coastal Europe & Mediterranean	demersal, rocky shores intertidally-50m
Perch <i>Perca fluviatilis</i>	Europe	lakes, ponds, rivers, slow current, inshore-30m brackish Baltic
Zander <i>Stizostedion lucioperca</i>	mid-central Europe	deep calm large lakes, lowland rivers, brackish Baltic cloudy water, not vegetation
Pike-Perch		

Table 5.2 (contd)

Species	European Distribution	Habitat
Pike <i>Esox lucius</i>	Europe	lowland lakes, rivers bream region, vegetation brackish water, Baltic
Pilchard <i>Sardina pilchardus</i>	mid-South coastal Europe	pelagic, inshore-180m, young occur in estuaries diurnal migration - surface at night, 55m in day
Pipefish 8 species	coastal Europe	marine shallows
Plaice <i>Pleuronectes platessus</i>	coastal Europe & Mediterranean	0-200m, occasionally estuaries demersal, buries into sandy substrate, gravel, mud
Pollack <i>Pollachius pollachius</i>	coastal/offshore Europe	rocky/rough substrate, inshore - 200m kelp beds pelagic-benthopelagic inshore, young in estuaries
Porbeagle <i>Lamna nasus</i>	coastal/offshore Europe	pelagic, open ocean (200-700m) rarely in shallow seas
Ray 19 species	mid-South coastal Europe	bottom living
Red Scorpionfish <i>Scorpaena scrofa</i>	South coastal Europe	demersal, marine & brackish, inshore-500m coarse substrates
Redfish <i>Sebastes</i> sp	North coastal Europe 2 species	10-1000m S. marinus pelagic: S viviparus demersal
Roach <i>Rutilus rutilus</i>	Europe	benthopelagic to 15m, lowland lakes, rivers prefers vegetation, slow current, gravel substrate fresh & brackish
Rudd <i>Scardinius erythrophthalmus</i>	Europe	lakes, slow river waters benthopelagic, fresh & brackish water
Ruffe <i>Gymnocephalus cernua</i>	Europe	lakes, slow rivers, sand/gravel substrate demersal, fresh & brackish water (0-10m)
Russian Sturgeon <i>Acipenser gueldenstaedtii</i>	East Europe	fresh & brackish - demersal, main flow marine inshore - soft substrates
Saithe <i>Pollachius virens</i>	North coastal Europe	demersal inshore-200m over rock substrates, kelp beds
Salema <i>Sarpa salpa</i>	South Europe	benthopelagic, inshore-70m rock/sand substrates with algal growth
Salmon <i>Salmo salar</i>	Atlantic Europe	offshore, coastal, brackish & freshwater
Salmonids	Notern hemisphere	freshwater
Sandeel 6 species	Atlantic Europe	marine - inshore & offshore sand/shell substrate common off shingle or sand beaches
Sea Breams 2 species Atlantic Europe S pagrus larger than auratus		estuaries
Sea Perch/Grouper 11 species	coastal South Europe	marine shallow-deep water
Shad <i>Alosa</i> sp	coastal/seas Europe 2 species	inshore - 200m
Shanny <i>Lipophrys pholis</i>	Atlantic coast Europe	inshore, intertidal-8m demersal, rocky substrates
Shark 9 species	coastal/offshore Europe	pelagic
Silver Bream <i>Abramis bjoerkna</i>	Europe	demersal, fresh & brackish water stagnant waters of lakes & rivers
Skate <i>Raja batis</i>	coastal Europe & Mediterranean	demersal, inshore-600m, generally 100-1000m
Smelt <i>Osmeridae</i>	North Europe	benthopelagic, close to shore: fresh, brackish & marine young - estuarine: sexually mature at 15-18cm
Smooth-hound <i>Mustelus mustelus</i>	mid-South Atlantic coast & Mediterranean	demersal, intertidal-350m usually 5-50m
Sole <i>Solea solea</i>	East Atlantic south of Trondheim fjord & Mediterranean	shelf, buries into sand/mud substrate demersal
Spanish mackerel <i>Scomber japonicus</i>	South Europe coast	pelagic, inshore-300m day - bottom, night - surface
Spanish Seabream <i>Pagellus acarne</i>	South Europe coast & Mediterranean	benthopelagic, commonly 40-100m down to 500m marine
Spurdog <i>Squalus acanthias</i>	coastal/offshore Europe, Mediterranean & Black Sea	inshore-1460m, marine & brackish estuaries benthopelagic, usually near bottom
Sterlet <i>Acipenser ruthenus</i>	Black & Caspian Sea drainages White & Kara Sea drainages	rivers, large lakes, brackish demersal
Stickleback 3 species	coastal and inland Europe	euryhaline

Table 5.2 (contd)

Species	European Distribution	Habitat
Stingray	coastal Europe	shelf waters - shallow - 200m partially buried sandy/muddy substrate
Common Stingray <i>Dasyatis pastinaca</i>	coastal Europe	marine & brackish, 3-200m demersal, sand/mud substrate
Swordfish <i>Xiphias gladius</i>	Europe	pelagic, marine offshore-800m
Tench <i>Tinca tinca</i>	mid-South Europe	demersal, fresh & brackish prefers still water, vegetation, mud substrate low oxygen tolerant
Thornback Ray <i>Raja clavata</i>	coastal Europe	demersal, marine, inshore (10-300m) occasionally 280m sand/gravel substrates
Three-spined Stickleback <i>Gasterosteus aculeatus</i>	inland & coastal Europe	prefers freshwater 0-1m but down to 27m also estuaries, tidal pools benthopelagic, vegetated areas
Tope <i>Galeorhinus galeus</i>	Europe	benthopelagic, shallows-550m, gravel/sand substrate pelagic in open ocean surf beaches - calm waters
Torsk <i>Brosme brosme</i>	N coastal Europe	demersal, marine, rock/coarse substrates offshore 150-450m, occasionally 20-1000m
Trout <i>Salmo trutta</i>	Europe	pelagic, fresh, brackish & marine prefers well oxygenated upland waters with vegetation
Tub Gurnard <i>Chelidonichthys lucerna</i>	coastal Europe	marine, mainly 50-150m, occasionally 20-300m demersal, sand/mud/gravel substrates
Tuna	mid-South Europe 11 species	warmer waters
Turbot <i>Scophthalmus maximus</i>	coastal Europe	marine & brackish, shallows-80m demersal, gravel/shell/sand substrates
Viviparous Blenny <i>Zoarces viviparus</i>	North Europe	demersal, sublittoral-40m, marine & brackish rocky substrate, in algae or tidal pools may remain out of water under stones/seaweed
Catfish/Wels <i>Silurus glanis</i>	mid/central Europe	demersal, fresh & brackish, soft substrate prefers slow deep waters with dense vegetation
Whitefish <i>Coregonus</i> sp.	Europe 6 species	Arctic rivers, brackish seas mountain lakes
Whiting <i>Merlangius merlangius</i>	North Europe	inshore (30-100m), occasionally 10-200m, marine & brackish benthopelagic, mud/gravel substrate
Wolf-fish <i>Anarhichas lupus</i>	North Europe	demersal, marine, offshore 100-500m
Wrasse	600 species	benthopelagic

Table 5.2 (contd)

Species	Concentrations	Active	Spawns
Allis Shad <i>Alosa alosa</i>	spawning groups		Apr-May main channel, far up rivers freshwater, swift current, night, gravel
Atlantic Horse Mackerel <i>Trachurus trachurus</i>	large schools		Jun-Aug, northern latitudes Nov-May, Adriatic
Asp <i>Aspius aspius</i>	adult solitary		Apr-Jun migrates upstream to spawn in tributaries over gravel beds
Ballan Wrasse <i>Labrus bergylta</i>	solitary, small schools	day	Apr-Aug rocky/gravel substrates in algae nests
Sea Bass <i>Dicentrarchus labrax</i>	young school adults more solitary		Mar-mid Jun near British Isles
Barbel <i>Barbus barbus</i>	large shoals	night-dispersed, feeding day - inactive shoals	Apr-Jul migrate upstream, spawn over gravel/stone substrate
Beluga <i>Huso huso</i>	spawning groups		late spring, Apr-May stony substrate
Black Goby <i>Gobius niger</i>			May-Aug in Baltic
Black Sea Roach <i>Rutilus frisii</i>	schools		spawns Apr-May plants/gravel shallows
Black Seabream <i>Spondyliosoma cantharus</i>	large schools		Apr-May, English Channel Feb-May
Blenny			
Bluefin Tuna <i>Thunnus thynnus</i>	schools		Jun-Aug Mediterranean
Bogue <i>Boops boops</i>	gregarious	night - surface	Mar-May
Bonito <i>Sarda sarda</i>	schools		May-Jul Mediterranean
Common Bream <i>Abramis brama</i>	overwintering schools spawning schools	night- shallows	Apr-Jun t.d. dense vegetation, shallows, night
Brill <i>Scophthalmus rhombus</i>			spring, summer Apr-Aug
Greater Pipefish <i>Syngnathus acus</i>			May-Aug
Bullrout <i>Myoxocephalus scorpius</i>			Dec-Mar North Sea
Carp <i>Cyprinus carpio</i>		night	late spring & summer, May-Jul flooded shallows, dense weeds
Chub <i>Leuciscus cephalus</i>	young - school adult - solitary		May-Jun shallows, gravel beds, weeds, tributaries
Cod <i>Gadus morhua</i>	schools - day	night crepuscular feeding	central North Sea Feb-Apr
Common Seabream <i>Diplodus vulgaris</i>	shoals		Oct Nov W Mediterranean
Atlantic Sturgeon <i>Acipenser oxyrinchus</i>	spawning groups		summer t.d. anadromous
Sturgeon <i>Acipenser sturio</i>	spawning groups solitary		Feb-Jun gravel, swift flowing water (2-10m deep) females can be 12% roe by weight
Conger <i>Conger conger</i>	adult-solitary	night - predator	tropical Atlantic - summer 3000-4000m
Couch's Seabream <i>Pagrus pagrus</i>			Apr-Jun
Crucian carp <i>Carassius carassius</i>			May-Jun t.d. pond/lake margins
Cuckoo Wrasse <i>Labrus mixtus</i>	solitary	day feed - incoming tides	May-Jul nests of algae in seaweed
Cyprinids	spawning		spawns in schools
Dab <i>Limanda limanda</i>			Jan-Jun t.d.

Table 5.2 (contd)

Species	Concentrations	Active	Spawns
Dentex <i>Dentex dentex</i>	adults solitary young gregarious		deep water
Dragonet <i>Callionymus lyra</i>	territorial		Feb-Mar Jan-Aug t.d.
Drum			
Dusky Perch/Grouper ? <i>Epinephelus marginatus</i>	solitary territorial		
Eagle Ray <i>Myliobatis aquila</i>	gregarious		oviparous young born in southern European waters
Eel <i>Anguilla anguilla</i>	spawning runs migration runs		mid Atlantic: Sargasso
Fifteen-spined Stickleback <i>Spinachia spinachia</i>	solitary/pairs		Apr-Jul: nest of plant material built in sublittoral region female dies after spawning
Flatfish			
Flounder <i>Platichthys flesus</i>		night - feeding	spring 25-40m on surface
Four-horned Sculpin <i>Trigloporus quadricornis</i>		night - May-Oct diurnal - Nov-Apr	Nov-Feb shallows
Gadids			
Garfish <i>Belone belone</i>	shoals	day	May-Jun inshore/estuaries
Gilthead <i>Sparus auratus</i>	solitary + small groups sedentary		May-Jun deep water
Gobiids			
Golden Redfish <i>Sebastes marinus</i>	gregarious		breed late summer/autumn
Grayling <i>Thymallus thymallus</i>	gregarious schools		Mar-May gravel beds
Greater Weever <i>Trachinus draco</i>		night - swim freely	Jun-Aug oviparous
Grey Gurnard <i>Chelidonichthys gurnardus</i>		night	Jan-Aug deep water
Grey Mullet	schools		
Gurnard			
Haddock <i>Melanogrammus aeglefinus</i>	schools	night	Feb-Jun North Sea
Hake <i>Merluccius merluccius</i>		night - mid water to feed	all year
Halibut <i>Hippoglossus hippoglossus</i>			Dec-Mar, Norway, Faroes 300-700m
Herring <i>Clupea harengus</i>	large schools in coastal waters	night - surface	spring spawners - inshore autumn spawners - offshore
Huchen <i>Hucho hucho</i>	solitary territorial		early spring, Mar-May migrates short distance to spawn gravel beds, mountain streams
Ide <i>Leuciscus idus</i>	schools		Apr-May t.d. river populations moves upstream over stone/sand, shallows lake populations move to rivers
Ling <i>Molva molva</i>			Mar-Aug spawning grounds: Biscay, W Britain & S Iceland
Long Rough Dab <i>Hippoglossoides platessoides</i>			Mar-Apr
Mackerel <i>Scomber scombrus</i>	large schools		May - Aug
Meagre <i>Argyrosomus regius</i>	spawning groups		Apr-Jul
Mediterranean Moray <i>Muraena helena</i>	solitary territorial	night - feeding	Jul-Sep
Perch <i>Perca fluviatilis</i>	young-schools	crepuscular - feeding	Apr-May shallows
Zander <i>Stizostedion lucioperca</i>	young-schools adults-solitary	crepuscular - feeding	Apr-Jun moves upstream to sand/stone substrate, shallows
Pike-Perch			

Table 5.2 (contd)

Species	Concentrations	Active	Spawns
Pike <i>Esox lucius</i>	adults - solitary		Mar-Jul t.d. shallows <20cm, over vegetation no feeding
Pilchard <i>Sardina pilchardus</i>	schools	night - feeding	Apr-Jul Mediterranean Mar-Oct Channel
Pipefish			
Plaice <i>Pleuronectes platessus</i>		night - feeding	Jan-Mar mainly 20-40m
Pollack <i>Pollachius pollachius</i>	breeding schools	night - feeding	Jan-Apr deep water (100-200m)
Porbeagle <i>Lamna nasus</i>	schools		
Ray			
Red Scorpionfish <i>Scorpaena scrofa</i>	solitary sedentary		May-Sep Algeria
Redfish <i>Sebastes</i> sp	schools		oviparous
Roach <i>Rutilus rutilus</i>	shoals	night	Apr-Jun t.d. shallows over stones/vegetation
Rudd <i>Scardinius erythrophthalmus</i>	shoals	day	Apr-Jun vegetation, reed beds
Ruffe <i>Gymnocephalus cernua</i>	small schools	night - feeding	Mar-Jun
Russian Sturgeon <i>Acipenser gueldenstaedtii</i>	solitary except when spawning		May-Jun
Saithe <i>Pollachius virens</i>	shoals		Jan-May 100-180m
Salema <i>Sarpa salpa</i>	schools		spring-autumn
Salmon <i>Salmo salar</i>	spawning runs		winter no feeding during spawning migration
Salmonids			no feeding during spawning migration
Sandeel	large schools mid water		
Sea Breams	large shoals		
Sea Perch/Grouper			no feeding during spawning migration
Shad <i>Alosa</i> sp			anadromous
Shanny <i>Lipophrys pholis</i>		day - high tide	Apr-Aug
Shark			
Silver Bream <i>Abramis bjoerkna</i>	gregarious		May-Jul t.d. shallow stagnant vegetated waters
Skate <i>Raja batis</i>			mate in spring eggs laid in summer
Smelt <i>Osmeridae</i>	spawning shoals		Feb-Apr rivers & estuaries
Smooth-hound <i>Mustelus mustelus</i>			viviparous
Sole <i>Solea solea</i>	solitary	night - feeding	Feb-Aug t.d. spawning migration - may be found pelagically
Spanish mackerel <i>Scomber japonicus</i>	schools	night - feeding	
Spanish Seabream <i>Pagellus acarne</i>			Mar-Apr & Nov
Spurdog <i>Squalus acanthias</i>	schools	night - surface	long gestation 18-24 mo, easily overfished all year - Mediterranean late summer - North European coast
Sterlet <i>Acipenser ruthenus</i>	spawning groups		mid Apr-Jun migrates upstream to spawn over stone/gravel spawns in mid-flow in fast current
Stickleback			male builds + protects nest

Table 5.2 (contd)

Species	Concentrations	Active	Spawns
Stingray			oviparous
Common Stingray <i>Dasyatis pastinaca</i>			
Swordfish <i>Xiphias gladius</i>			Jan-Oct Sargasso Sea
Tench <i>Tinca tinca</i>	spawning schools		late spring/early summer, May-Jul shallows, vegetation schools
Thornback Ray <i>Raja clavata</i>	schools		Mar- Aug migrate inshore
Three-spined Stickleback <i>Gasterosteus aculeatus</i>	small schools	nocturnal surface feeding	spring-early summer, Mar-Jul freshwater
Tope <i>Galeorhinus galeus</i>	small schools		oviparous born Jun-Sep, shallows
Torsk <i>Brosme brosme</i>	solitary, small schools		Apr-Jul 200m
Trout <i>Salmo trutta</i>	spawning groups	nocturnal feeding	Oct-Jan some populations anadromous
Tub Gurnard <i>Chelidonichthys lucerna</i>	solitary, schools		May-Jun
Tuna			
Turbot <i>Scophthalmus maximus</i>			Apr-Aug
Viviparous Blenny <i>Zoarces viviparus</i>			Aug-Sep - mating viviparous - born Dec-Feb
Catfish/Wels <i>Silurus glanis</i>		crepuscular feeding in surface/shallow water	May-Aug t.d. shoreline in dense vegetation
Whitefish <i>Coregonus</i> sp.	schools		anadromous in Baltic
Whiting <i>Merlangius merlangius</i>			Jan-Jul shallows
Wolf-fish <i>Anarhichas lupus</i>	solitary		Dec-Feb
Wrasse		day	

Table 5.2 (contd)

Species	Seasonality	Food/Natural Baits
Allis Shad <i>Alosa alosa</i>	anadromous ascends rivers spring (Apr-May) nocturnal spawning in shoals over gravel beds	zooplankton, shrimp, small fish
Atlantic Horse Mackerel <i>Trachurus trachurus</i>	deeper water winter north migration in summer spawn Skaggerak/Baltic - summer	fish, crustaceans, cephalopods
Asp <i>Aspius aspius</i>	inshore year round	benthopelagic predator fish & small waterfowl
Ballan Wrasse <i>Labrus bergyllta</i>	inshore all year	molluscs (mussels), crustaceans bait - crab, peeler crab
Sea Bass <i>Dicentrarchus labrax</i>	estuaries spring-autumn deeper water - winter	shrimps, molluscs, fish (herring, sandeels) squid, crustaceans
Barbel <i>Barbus barbus</i>	migrates upstream to spawn	night feeding: benthic invertebrates, small fish, plants take hemp bait
Beluga <i>Huso huso</i>	anadromous ascends rivers spring (Jan-Apr) or autumn (Aug-Nov) ascends at 1.5-2m depth, on bottom in main flow	fish (gobies, herring, carp) invertebrates, crustaceans, molluscs
Black Goby <i>Gobius niger</i>		benthic invertebrates: crustaceans, molluscs small fish
Black Sea Roach <i>Rutilus frisii</i>		
Black Seabream <i>Spondylosoma cantharus</i>		bait - any omnivorous: invertebrates, seaweed
Blenny		
Bluefin Tuna <i>Thunnus thynnus</i>	migrates to northern waters in summer seasonally close to shore	schooling fish, squid, crustaceans
Bogue <i>Boops boops</i>		omnivorous: crustaceans, fish, plankton
Bonito <i>Sarda sarda</i>		small schooling fish, large invertebrates can swallow large prey
Common Bream <i>Abramis brama</i>	overwinter in schools - deeper water spawning schools	bottom substrate feeder - invertebrates blood worms, midge larvae, pea mussels
Brill <i>Scophthalmus rhombus</i>		fish (sandeels, whiting) squid, large crustaceans
Greater Pipefish <i>Syngnathus acus</i>		
Bullrout <i>Myoxocephalus scorpius</i>		small fish, large crustaceans
Carp <i>Cyprinus carpio</i>		insect larvae, snails, crustaceans, vegetation omnivorous take nut bait
Chub <i>Leuciscus cephalus</i>		invertebrates, small fish, vegetation amphibians, small mammals, waterfowl
Cod <i>Gadus morhua</i>	young (<78cm)-inshore summer - night surface feeder: day rest at 30m winter - max depth 15m, inactive at night winter - adults occasionally inshore on shingle beach winter - adults occasionally in estuaries	crustaceans, worms, brittlestars fish (capelin, herring, sandeels) large cod bait - lugworm, squid, whiting small cod bait - mussel, peeler crab, ragworm bait must be fresh
Common Seabream <i>Diplodus vulgaris</i>		crustaceans, worms, molluscs
Atlantic Sturgeon <i>Acipenser oxyrinchus</i>		
Sturgeon <i>Acipenser sturio</i>	anadromous - enters river spring/early summer overwinter in freshwater - deep holes	fish, invertebrates, crustaceans, molluscs, worms bottom feeding
Conger <i>Conger conger</i>		fish, crustaceans, octopus, crab feeding suppressed in low or high pressure conditions
Couch's Seabream <i>Pagrus pagrus</i>		crustaceans, molluscs, fish
Crucian carp <i>Carassius carassius</i>	burrows into mud in winter or very dry conditions	benthic planktonic organisms, insect larvae
Cuckoo Wrasse <i>Labrus mixtus</i>	summer - inshore (2m) winter - offshore	crustaceans, fish, molluscs lugworm, crustacean, mussels good bait bait - crab, peeler crab
Cyprinids		
Dab <i>Limanda limanda</i>	summer - inshore	bottom living invertebrates fish

Table 5.2 (contd)

Species	Seasonality	Food/Natural Baits
Dentex <i>Dentex dentex</i>	spring-inshore	mackerel good baits molluscs, fish, cephalopods
Dragonet <i>Callionymus lyra</i>		polychaete worms, crustaceans, molluscs
Drum		
Dusky Perch/Grouper ? <i>Epinephelus marginatus</i>		crab, octopus, fish
Eagle Ray <i>Myliobatis aquila</i>		molluscs, crustaceans
Eel <i>Anguilla anguilla</i>	catadromous elvers migrate spring + autumn on high tide elver - enters freshwater at c.7cm brown eel - hibernates buried in substrate in winter	
Fifteen-spined Stickleback <i>Spinachia spinachia</i>		crustaceans
Flatfish		bottom feeders
Flounder <i>Platichthys flesus</i>	migrates up shore to feed at high tide deeper water spawning - spring very shallow water - summer	bottom living invertebrates (mainly molluscs)
Four-horned Sculpin <i>Trigloporus quadricornis</i>	short onshore-offshore seasonal migration spring/summer - deeper water	small crustaceans, fish, worms
Gadids		
Garfish <i>Belone belone</i>	inshore in late spring to autumn similar migratory pattern as mackerel	fish (whitebait, brit, herring roe) squid, crustaceans: bait - ragworm
Gilthead <i>Sparus auratus</i>		fish, invertebrates, vegetation carnivorous, facultative herbivorous
Gobiids		
Golden Redfish <i>Sebastes marinus</i>		fish, krill, jellyfish
Grayling <i>Thymallus thymallus</i>		benthic invertebrates, insects, worms, crustaceans
Greater Weever <i>Trachinus draco</i>		small invertebrates, fish
Grey Gurnard <i>Chelidonichthys gurnardus</i>	summer - estuaries	bottom living crustaceans, fish night feeder - may feed on surface
Grey Mullet		filter feeder
Gurnard		invertebrates
Haddock <i>Melanogrammus aeglefinus</i>	in cooler waters may be inshore in summer offshore in winter	molluscs, echinoderms, worms, crustaceans fish, herring eggs
Hake <i>Merluccius merluccius</i>	shallower water-summer offshore year round	fish, squid diurnal migration from bottom to midwater to night feed
Halibut <i>Hippoglossus hippoglossus</i>		predatory - redfish fish, cephalopods, crustaceans
Herring <i>Clupea harengus</i>	young- inshore feeding inhibited in winter	facultative zooplankton feeder copepods
Huchen <i>Hucho hucho</i>		carnivore: fish (nase), amphibians, small mammals, waterfowl, crustaceans young - invertebrates
Ide <i>Leuciscus idus</i>	migratory winter-deep water	insects, molluscs, crustaceans
Ling <i>Molva molva</i>	winter - shallower water	fish (Norway pout, cod, blue whiting) crustaceans
Long Rough Dab <i>Hippoglossoides platessoides</i>		small fish invertebrates, echinoderms, crustaceans
Mackerel <i>Scomber scombrus</i>	inshore - summer winter-fast	pelagic crustaceans, fish bait - ragworm mid-surface feeders
Meagre <i>Argyrosomus regius</i>	congregates inshore to spawn	fish (clupeid & mugilid shoals), nektonic crustaceans
Mediterranean Moray <i>Muraena helena</i>		fish, invertebrates, crabs, squid
Perch <i>Perca fluviatilis</i>	summer - feeds in shallows continues feeding in winter	fish (sticklebacks, perch, roach, cyprinids) predator
Zander <i>Stizostedion lucioperca</i>	winter - deeper water	fish (bream, bleak, roach, perch, whitefish) insects & crustaceans
Pike-Perch		

Table 5.2 (contd)

Species	Seasonality	Food/Natural Baits
Pike <i>Esox lucius</i>	deeper water - winter	fish: prefer visible bait or fatty dead bait feed irregularly - seldom in warm months 60% of annual intake immediately after spawning less seasonal variation in condition
Pilchard <i>Sardina pilchardus</i>		planktonic crustaceans
Pipefish		
Plaice <i>Pleuronectes platessus</i>	very shallow water - summer	molluscs, polychaetes feed-incoming tides
Pollack <i>Pollachius pollachius</i>	young-inshore adults - inshore kelp beds in winter	fish (sandeels, herring, cod) crustaceans mid-surface feeders bait - ragworm
Porbeagle <i>Lamna nasus</i>	summer - inshore follow mackerel shoals to feed winter - offshore	schooling fish, shark, squid mackerel, herring good baits
Ray		
Red Scorpionfish <i>Scorpaena scrofa</i>		fish, crustaceans, molluscs
Redfish <i>Sebastes</i> sp		
Roach <i>Rutilus rutilus</i>		omnivorous - invertebrates, plant material (adults pref) insects, crustaceans, molluscs
Rudd <i>Scardinius erythrophthalmus</i>		insects, crustaceans, insect larvae, plants day, surface feeding in vegetated areas
Ruffe <i>Gymnocephalus cernua</i>		zooplankton: invertebrates, small fish, fish eggs
Russian Sturgeon <i>Acipenser gueldenstaedtii</i>	anadromous - ascends rivers Mar-Jun	molluscs, crustaceans, small fish
Saithe <i>Pollachius virens</i>	coastal waters - spring deeper water - winter	young- crustaceans fish(sandeel, capelin) adult - fish (cod, herring), bait - ragworm mid-surface feeders
Salema <i>Sarpa salpa</i>		herbivorous
Salmon <i>Salmo salar</i>	anadromous	
Salmonids	some fish available year round in freshwater	
Sandeel	anadromous	
Sea Breams	winter - shallow inshore water	
Sea Perch/Grouper		crustaceans, fish
Shad <i>Alosa</i> sp	rivers -summer months	zooplankton: crustaceans, fish
Shanny <i>Lipophrys pholis</i>		invertebrates, seaweed
Shark		predators ground baited with oily fish
Silver Bream <i>Abramis bjoerkna</i>		midwater + bottom feeding benthic invertebrates
Skate <i>Raja batis</i>	today taken at edge of shelf c.200m	fish, crab, octopus
Smelt <i>Osmeridae</i>	anadromous enters estuaries in winter	predators fish, crustaceans
Smooth-hound <i>Mustelus mustelus</i>	inshore year round	crustaceans, invertebrates, small teleosts
Sole <i>Solea solea</i>	winter - deeper water	benthic invertebrates: worms, molluscs, crustaceans night feeding
Spanish mackerel <i>Scomber japonicus</i>	young - closer to shore	omnivorous: crustaceans, fish, squid
Spanish Seabream <i>Pagellus acarne</i>		invertebrates, fish
Spurdog <i>Squalus acanthias</i>	migration between inshore and deep waters	schooling & bottom living teleosts, invertebrates herring, sprat, pilchard, sandeel, whitefish cod, dragonet, flatfish
Sterlet <i>Acipenser ruthenus</i>	winter-deeper water	midge larvae, mayfly larvae, snails, worms feeding inhibited in winter
Stickleback		

Table 5.2 (contd)

Species	Seasonality	Food/Natural Baits
Stingray		fish, invertebrates
Common Stingray <i>Dasyatis pastinaca</i>	common in north summer, autumn	molluscs, crustaceans, crabs, fish
Swordfish <i>Xiphias gladius</i>	migrate to temperate waters in summer	fish, squid, crustaceans
Tench <i>Tinca tinca</i>	dormant in cold winters buries into mud substrate	omnivorous: insect larvae, pond snails, plants crustaceans
Thornback Ray <i>Raja clavata</i>	young - inshore shallows year round adults - inshore mating	omnivorous: prefers crustaceans fish (sandeels, herring, sprat, gadids)
Three-spined Stickleback <i>Gasterosteus aculeatus</i>		crustaceans, larval insects, molluscs, worms fish
Tope <i>Galeorhinus galeus</i>	inshore specimens tend to be gravid females i.e. easily over exploited inshore - warmer months at surf beaches	small fish (whiting, pouting, cod, sandeel) crustaceans, echinoderms, bottom fish bait must be very fresh - prefers mackerel + dab
Torsk <i>Brosme brosme</i>	deep water all year, usually >150m generally far from shore in N E Atlantic	crustaceans, molluscs, benthic fish
Trout <i>Salmo trutta</i>	migratory inactive in winter	insects, molluscs, crustaceans, small fish feeds on surface/shallows
Tub Gurnard <i>Chelidonichthys lucerna</i>		fish (sandeels, flatfish, gobies, dragonets) crustaceans (crabs, brown shrimp), molluscs
Tuna		
Turbot <i>Scophthalmus maximus</i>		fish (whiting, herring, sprat, sandeels, pouting flatfish, gobies, dragonets), bivalves
Viviparous Blenny <i>Zoarces viviparus</i>		gastropods, chironomids, crustaceans
Catfish/Wels <i>Silurus glanis</i>	feeding inhibited in autumn/winter deeper water during day	fish (eel, burbot, tench, bream, roach) small mammals, amphibians small piglets used as bait - Lake Baikal
Whitefish <i>Coregonus</i> sp.	migratory	
Whiting <i>Merlangius merlangius</i>	young inshore	fish (sandeel esp, also herring, sprats, gadids) shrimp, crustaceans
Wolf-fish <i>Anarhichas lupus</i>		molluscs, crabs, lobsters, echinoderms
Wrasse	inshore - summer	

Table 5.3 - Seasonal Periods of Greatest Vulnerability of Fish Species

Species	Species Location	Seasonal Vulnerability
Allis Shad	inshore	summer migratory spawning runs
Asp	inshore	inshore year round
Atlantic Horse Mackerel	inshore	summer - inshore
Atlantic Sturgeon	inshore	summer migratory spawning runs
Ballan Wrasse	inshore	inshore year round
Barbel	inshore	inshore year round
Barbel	inshore	inshore year round
Barbel	inshore	summer migratory spawning runs
Beluga	main flow	spring + autumn migratory spawning runs
Black Goby	inshore	inshore year round
Black Sea Roach	inshore	summer spawning
Black Seabream	inshore	inshore year round
Bluefin Tuna	inshore	occasional inshore visitors
Bogue	inshore	inshore year round
Bonito	inshore	inshore year round
Brill	inshore	inshore year round
Greater Pipefish	inshore	inshore year round
Bullrout	inshore	inshore year round
Carp	inshore	inshore year round
Catfish/Wels	inshore	inshore year round
Chub	inshore	inshore year round
Cod	inshore	winter - more inshore
Common Bream	inshore	inshore year round
Common Bream	inshore	summer spawning
Common Seabream	inshore	inshore year round
Common Stingray	inshore	inshore - summer/autumn in temperate regions
Sturgeon	inshore	summer migratory spawning runs
Conger	inshore	inshore year round
Couch's Seabream	inshore	summer - more inshore
Crucian carp	inshore	inshore year round
Cuckoo Wrasse	inshore	inshore year round
Dab	inshore	summer - inshore
Dentex	inshore	spring - inshore
Dragonet	inshore	inshore year round
Drum	inshore	some species available inshore
Dusky Perch ?	inshore	
Eagle Ray	inshore	inshore year round
Eel - brown eel	inshore	inshore year round
Eel - mature	inshore	spawning runs
Elver	inshore	spawning runs
Fifteen-spined Stickleback	inshore	inshore year round
Flatfish	inshore	inshore year round
Flounder	inshore	inshore shallows -summer
Flounder		
Four-horned Sculpin	inshore	winter - shallows

Table 5.3 (contd)

Species	Species Location	Seasonal Vulnerability
Gadids	varies	~
Garfish	inshore	inshore late spring - autumn
Gilthead	inshore	inshore autumn - spring
Gobiids	inshore	inshore year round
Golden Redfish	offshore	minimum depth c.100m
Grayling	inshore	spawning
Greater Weever	inshore	inshore year round
Grey Gurnard	inshore	inshore year round
Grey Mullet	inshore	inshore year round
Gurnard	inshore	inshore shallows -summer
Haddock	inshore	inshore - summer in temperate regions
Hake	offshore	minimum depth 30m
Halibut	offshore	minimum depth 50m
Herring	inshore	seasonally inshore
Huchen	inshore	summer spawning migration
Ide/Orfe	inshore	summer spawning migration
Ide/Orfe	inshore	deeper water - winter
Ling	inshore	inshore - winter
Long Rough Dab	inshore	inshore year round in temperate regions
Mackerel	inshore	inshore - summer
Meagre	inshore	inshore year round
Mediterranean Moray	inshore	inshore year round
Perch	inshore	inshore shallows - summer
Perch	inshore	deeper water - winter
Pike	inshore	spawning - shallows
Pike	inshore	post-spawning - feeding
Pike	inshore	deeper water - winter
Pilchard	inshore	inshore year round
Pipefish	inshore	inshore year round
Plaice	inshore	very shallow water - summer
Pollack	inshore	inshore kelp beds - winter
Porbeagle	inshore	inshore - summer
Ray	inshore	~
Red Scorpionfish	inshore	inshore year round
Redfish	offshore	minimum depth 10m
Roach	inshore	inshore year round
Rudd	inshore	inshore year round
Ruffe	inshore	inshore year round
Russian Sturgeon	main flow	summer migratory spawning runs
Saithe	inshore	inshore - summer
Salema	inshore	inshore year round
Salmon	inshore	inshore year round
Salmonids	inshore	inshore year round
Sandeel	inshore	inshore year round
Sea Bass	inshore	summer - inshore
Sea Breams	inshore	inshore shallows - winter
Sea Perch/Grouper	inshore	~

Table 5.3 (contd)

Species	Species Location	Seasonal Vulnerability
Serrandiae	varies	~
Shad	inshore	summer migratory spawning runs
Shanny	inshore	inshore year round
Shark	varies	~
Silver Bream	inshore	inshore year round
Skate	inshore	inshore year round
Smelt	inshore	autumn/winter spawning concentrations
Smooth-hound	inshore	inshore year round
Sole	inshore	inshore year round
Spanish Mackerel	inshore	summer - inshore
Spanish Seabream	offshore	
Spurdog	inshore	inshore - late summer in temperate regions
Stellate Sturgeon	main flow	summer migratory spawning runs
Sterlet	main flow	summer migratory spawning runs
Sterlet	main flow	deeper water - winter
Stickleback	inshore	inshore year round
Stingray	varies	~
Sturgeon	varies	summer migratory spawning runs
Swordfish	offshore	
Tench	inshore	dormant in winter
Thornback Ray	inshore	inshore shallows - summer
Three-spined Stickleback	inshore	inshore year round
Tope	inshore	inshore - summer
Torsk	offshore	minimum depth 20m
Trout	inshore	summer spawning migration
Tub Gurnard	inshore	inshore year round
Tuna	varies	~
Turbot	inshore	inshore year round
Viviparous Blenny	inshore	inshore year round
Whitefish	inshore	summer spawning migration
Whiting	inshore	inshore year round
Wolf-fish	offshore	minimum depth 100m
Wrasse	inshore	inshore shallows - summer
Zander	inshore	inshore year round

Table 5.4 - Methods of Fish Capture determined from Fish Biology, Behaviour & Habitat and Analogy

Table 5.4a - Method of Capture

Species	Most Efficient Method of Capture Based on Biological Adaptation [^]	Capture Methods Documented in Traditional Fisheries
Allis Shad	weir, encircling net	net
Atlantic Horse Mackerel	encircling net	net, spear, hook
Atlantic Sturgeon	weir, troll-line	spear, troll-line, trap
Asp	set net, trap	dip net, weir, gaff, occasionally trap
Ballan Wrasse	hook + line	hook
Sea Bass	encircling net	nets
Barbel	set net, trap	seine, trap, hook
Beluga	long-line	long-line, hook, barrier
Black Goby	close woven trap	hand
Black Sea Roach	set net, trap	net, weir, trap
Black Seabream	encircling net	hook, net
Blenny	close woven trap	
Bluefin Tuna	troll-line	purse seine, long-line, trap net, troll, net
Bogue	encircling net	recent - pelagic trawls
Bonito	troll-line	troll
Common Bream	set net	stake nets, winter-seines
Brill	spear/harpoon	
Greater Pipefish	close woven trap	
Bullrout	close woven trap	hand
Carp	set net	net, weir, bow + arrow, hand, occasionally - trap
Chub	set net, trap	hand
Cod	long-line	hook/gorge, bottom long-line, occasionally traps recent - nets
Common Seabream	encircling net	net
Common Sturgeon	spear/harpoon, long-line	long-line, trap, weir, floated hook, club, gaff, riding lift/gill/drift net, snare, harpoon (incl toggle head)
Conger	hook + line	hook
Couch's Seabream	encircling net	net
Crucian carp	set net	net, weir, occasionally trap
Cuckoo Wrasse	hook + line	hook
Cyprinids	varies with species	dip net, weir, gaff, occasionally trap
Dab	hook + line, spear/harpoon	trawl, seine
Dentex	encircling net	net, young fish taken in traps
Dragonet	close woven trap	
Drum	encircling net	net
Dusky Perch ?	encircling net	net
Eagle Ray	spear/harpoon, long-line	long-line, spear, harpoon, trap
Eel	spear/harpoon, weir	weir, trap, dip/gill/fyke/lift/seine net, gorge, hook long-line, rake, spear, leister, bobbing traps, nets
Elver	weir	
Brown eel	spear/harpoon	leister
Fifteen-spined Stickleback	close woven trap, tangle net	night fishing with artificial light as lure
Flatfish	spear/harpoon, hook+ line	spear/leister, hook, trumpet trap, recently - drag net
Flounder	spear/harpoon, hook+ line	spear/leister, trap, hand, seine, line, recently - drag net
Four-horned Sculpin	hook + line	hook, gorge
Gadids	long-line	hook, long-line, recently - nets + traps
Garfish	encircling net	hook, seine
Gilthead	encircling net	net, hook
Gobiids	close woven trap	hand, trap
Golden Redfish	long-line	hook
Grayling	weir or encircling net**	seine, weir
Greater Weever	close woven trap	
Grey Gurnard	close woven trap	trap
Grey Mullet	encircling net	seine
Gurnard	close woven trap	trap, hook, set net
Haddock	long-line	bottom long-line, seine, leister, trap, hook
Hake	long-line	trawl, hook
Halibut	long-line	hook, troll, long-line
Herring	encircling net	seine/dip/drift/gill/trawl net, hook, rake, barrier, weir, trap
Huchen	weir or encircling net**, harpoon/spear	bow + arrow, spear, harpoon, net
Ide	encircling/set net or trap*	drift/set/seine/lift net, weir, trap
Ling	long-line	hook, gorge, recent - trawl

Table 5.4a (contd)

Species	Most Efficient Method of Capture Based on Biological Adaptation ^a	Capture Methods Documented in Traditional Fisheries
Long Rough Dab	spear/harpoon, hook+ line	trap, spear, leister, hook
Mackerel	encircling net	drift/set net, spear, hook, long-line, troll
Meagre	spear/harpoon, hook+ line	
Mediterranean Moray	hook + line	hook
Perch	encircling/set net or trap*	weir, seine, dip-net, trap, hook (+ ice fishing), gorge, gaff
Zander	spear/harpoon, hook+ line	trap
Pike	spear/harpoon, hook+ line	seine/gill/fyke net, snare, leister, harpoon hook (+ ice fishing), trap, bow + arrow
Pilchard	encircling net	net
Pipefish	trap	
Plaice	spear/harpoon	spear, leister, trap, set net, hook, recently - trawl/drag net
Pollack	hook + line, encircling net	net, hook
Porbeagle	long-line	hook, long-line
Ray	long-line, spear/harpoon	long-line, harpoon, trap
Red Scorpionfish	long-line	
Redfish	long-line	hook
Roach	encircling/set net or trap*	seine/set, net, weir, hook (+ ice fishing), occasionally trap
Rudd	encircling/set net or trap*	net, weir, occasionally trap
Ruffe	trap, net	trap
Russian Sturgeon	long-line, tangle net, spear/harpoon	long-line, trap, weir, harpoon (incl toggle head) club, gaff, riding, lift/seine/gill/drift net, snare
Saithe	long-line	trawl, seine/dip, long-line, leister, trap, hook
Salema	encircling net	net
Salmon	weir, troll-line	club, spear, troll, trap, lift/bag/gill net harpoon (incl toggle head), weir, tidal weir
Salmonids	weir, troll-line	club, spear, troll, trap, lift/bag/gill net harpoon (incl toggle head), weir, tidal weir, snare
Sandeel	hand collection at low tide	trawl, gaff, rakes, small nets
Sea Breems	encircling net	net, hook
Sea Perch/Grouper	encircling net	
Serranidae	encircling net	net
Shad	encircling net, weir	net
Shanny	trap	
Shark	hook + line, spear/harpoon	hook, snare, toggle-head harpoon
Silver Bream	net, trap	
Skate	hook + line, spear	long-line, spear
Smelt	trap, net	dip-net, close woven trap
Smooth-hound	net	hand-line
Sole	hook + line, spear	gillnet, seine, trap, hook, hand
Spanish Mackerel	encircling net	net
Spanish Seabream	encircling net	net
Spurdog	encircling net	net, trawl
Sterlet	hook + line, tangle net	hook, trap, recent - tangle net - hook commonest
Stickleback	tangle net, trap	night fishing with artificial light as lure
Stingray	hook + line, spear/harpoon	spear
Common Stingray	hook + line, spear/harpoon	spear
Swordfish	hook + line, spear/harpoon	harpoon
Tench	net, trap	net, weir, occasionally trap
Thornback Ray	hook + line, spear/harpoon	hook, long-line, harpoon, trap, bottom trawl
Three-spined Stickleback	encircling net, trap	night fishing with artificial light as lure
Tope	hook + line, long-line	hook
Torsk	hook + line, long-line	hook, long-line, trawls
Trout	hook + line, weir	club, spear, troll, trap, lift/bag/gill net, harpoon (incl toggle head), weir, tidal weir, snare
Tub Gurnard	net, trap	
Tuna	hook + line, troll-line	troll, net
Turbot	hook + line, spear	seine, trawl, hook, hand
Viviparous Blenny	encircling net, trap	seine, trap
Catfish	hook + line, spear/harpoon	cylindrical trap hook (particularly circular hooks) set/gill nets
Whitefish	set-net, hook + line	gill/set/trawl net, hook
Whiting	hook + line, long-line	net, trap, leister, long-line
Wolf-fish	hook + line, long-line	hook
Wrasse	hook + line	hook

^anon-industrial techniques - this may vary seasonally (owing to habitat & behavioural variability), more than one technique is therefore listed for certain species

* type of net used is dependent on density of vegetation

* choice of gear is dependent on water depth

Table 5.4b - Food Value of Species Identified at Mesolithic Sites

Species	Food Value
Allis Shad	tasty flesh - local commercial fishery
Atlantic Horse Mackerel	commercial fishery
Atlantic Sturgeon	commercial fishery
Asp	commercial fishery
Ballan Wrasse	subsistence fisheries
Sea Bass	valuable food fish
Barbel	tasty flesh - too bony for commercial fishery
Beluga	fish + roe commercially exploited
Black Goby	commercial fishery
Black Sea Roach	~
Black Seabream	numbers too small for commercial fishery
Blenny	not commercially fished
Bluefin Tuna	valuable commercial fishery
Bogue	commercial fishery
Bonito	commercial fishery
Common Bream	commercial fishery
Brill	commercial fishery
Greater Pipefish	not food fish
Bullrout	not food fish
Carp	popular food fish in Eastern Europe, farmed
Chub	minor commercial importance
Cod	commercial fishery
Common Seabream	commercial fishery
Common Sturgeon	commercial fishery
Conger	commercial fishery
Couch's Seabream	commercial fishery
Crucian carp	commercial + farmed fishery
Cuckoo Wrasse	subsistence fisheries
Cyprinids	~
Dab	commercial fishery - considered best tasting flatfish
Dentex	commercial + farmed fishery
Dragonet	minor commercial importance
Drum	~
Dusky Perch ?	commercial fishery
Eagle Ray	minor commercial importance
Eel	commercial fishery
Elver	commercial fishery
Brown eel	commercial fishery
Fifteen-spined Stickleback	no commercial value
Flatfish	commercial fishery - most species
Flounder	commercial fishery
Four-horned Sculpin	taken in subsistence fisheries
Gadids	commercial fishery
Garfish	good food fish
Gilthead	commercial + farmed fishery
Gobiids	~
Golden Redfish	commercial fishery
Grayling	commercial fishery

Table 5.4b (contd)

Species	Food Value
Greater Weever	minor commercial importance
Grey Gurnard	commercial fishery
Grey Mullet	commercial fishery - Mediterranean
Gurnard	commercial fishery
Haddock	commercial fishery
Hake	commercial fishery
Halibut	commercial fishery
Herring	commercial fishery
Huchen	commercial fishery
Ide	commercial fishery - Eastern Europe
Ling	valued food fish
Long Rough Dab	commercial fishery
Mackerel	commercial fishery
Meagre	valued food fish
Mediterranean Moray	little food value
Perch	tasty flesh - too bony for commercial fishery
Zander	good food fish - Eastern Europe
Pike	good food fish - Eastern Europe
Pilchard	commercial fishery
Pipefish	no food value
Plaice	commercial fishery - most valued European flatfish
Pollack	food fish - very dry flesh limits palatability
Porbeagle	good food fish - oil taken commercially
Ray	~
Red Scorpionfish	commercial fishery
Redfish	commercial fishery
Roach	minor commercial fishery
Rudd	minor commercial importance
Ruffe	minor commercial importance
Russian Sturgeon	commercial fishery
Saithe	commercial fishery
Salema	commercial fishery
Salmon	commercial fishery, farmed
Salmonids	commercial fishery, farmed
Sandeel	no food value
Sea Breems	commercial fishery
Sea Perch/Grouper	commercial fishery
Serraniae	commercial fishery - certain species
Shad	tasty flesh - too bony for commercial fishery
Shanny	no food value
Shark	commercial fishery of certain species for oil
Silver Bream	minor commercial importance
Skate	minor commercial importance
Smelt	commercial fishery
Smooth-hound	commercial fishery for flesh & oil
Sole	commercial fishery
Spanish Mackerel	commercial fishery

Table 5.4b (contd)

Species	Food Value
Spanish Seabream	commercial fishery
Spurdog	commercial fishery for flesh & oil
Sterlet	commercial fishery, farmed - Eastern Europe
Stickleback	commercial fishery for oil to 19th century in Baltic
Stingray	~
Common Stingray	commercial fishery
Swordfish	valuable commercial fishery
Tench	commercial fishery
Thornback Ray	commercial fishery
Three-spined Stickleback	commercial fishery for oil to 19th century in Baltic
Tope	commercial fishery
Torsk	commercial fishery
Trout	commercial fishery, farmed
Tub Gurnard	limited commercial fishery
Tuna	commercial fishery
Turbot	valuable food fish
Viviparous Blenny	food fish in Baltic
Catfish	commercial fishery
Whitefish	commercial fishery
Whiting	commercial fishery
Wolf-fish	commercial fishery
Wrasse	locally exploited food fish - subsistence fisheries

Table 5.4c - Comments Regarding the Capture of Specific Species

Species	Comments
Allis Shad	successful breeding populations only in France & Portugal
Sea Bass	very sensitive to noise + movement
Barbel	roe poisonous in large quantities
Beluga	largest European freshwater fish: anecdotal weight 4100kg fights vigorously in summer - fishermen lose lives
Black Seabream	flesh favoured
Bonito	ciguatoxic
Carp	uproot vegetation - detrimental to other fish stocks
Chub	mediocre flesh
Cod	traps used only when cod come inshore on a predictable basis large cod may follow sprat + herring inshore to feed: very sensitive to noise
Common Sturgeon	docile once caught except in breeding season roe prized - best collected some time before spawning
Conger	fights hard, snaps lines, bites when handled, difficult to kill: ciguatoxic
Couch's Seabream	ciguatoxic
Dab	natural baits only - lugworm + ragworm
Dragonet	venomous
Eagle Ray	highly esteemed flesh
Eel	greatest olfactory acuity - very particular to bait freshness/handling/gear smell below 9 degrees C - baits ignored freshwater exploitation - generally takes larger females
Flatfish	not sensitive to noise
Gobiids	often taken in tidal pools
Golden Redfish	ciguatoxic
Greater Weever	venomous spines in dorsal fin
Grey Mullet	filter feeders will not respond to bait
Herring	visual feeders: light determines vertical distribution
Mackerel	can be concentrated at night by artificial light sources
Mediterranean Moray	fights ferociously - wounds from tail spines turn septic
Perch	often used as pike bait
Pike	pike can easily bite through steel lines: don't respond to bait in warm months
Pollack	very sensitive to noise, movement: by-product of cod & saithe fisheries
Porbeagle	struggle for long periods: follow mackerel shoals inshore
Red Scorpionfish	venomous
Roach	brackish water populations of Baltic & Black Seas are anadromous
Salema	ciguatoxic
Salmon	not v sensitive to noise but will jump out of water if paddle beaten against boat
Sandeel	taken as fish bait
Shanny	can be found out of water under rocks/seaweed at low tide
Shark	repelled by dried shark skin not often taken for flesh which tastes/smells of ammonia
Spurdog	tail spines inject toxins - cause painful slow healing wounds late maturity makes species susceptible to overfishing
Sterlet	smallest sturgeon
Common Stingray	poisonous tail spine
Tench	esteemed flesh
Tope	reputed to be most difficult species to angle: taken for oil & flesh
Trout	very wary of gear + bait
Catfish	flesh in best condition in specimens of 3-4kg: don't often respond to baited hooks very tough mouth - often taken internally with circular hooks or gorge docile once landed - easily despatched: very sensitive to noise traps and nets only used for smaller fish
Whitefish	follows shrimp inshore + into estuaries

Table 6.1 Database of Mesolithic Sites Included in Study

Table 6.1a Site Location

Site	Country	Location	Shoreline at occupation*
Aamolle	Denmark	Jutland	C
Abri Cornille	France	Province	I
Abri de Chinchon	France	Province	I
Abri du Pape	Belgium	Namur Province - Meuse River	I
Acy	France	Somme Valley	I
Advik	Norway	Varanger Fjord	C
Aero	Denmark	Fyn	C
Agernaes	Denmark	Fyn	I
Agerod Ib	Sweden	N W Agerods mosse	I
Agerod Id	Sweden	N W Agerods mosse	I
Agerod I:HC	Sweden	N W Agerods mosse	I
Agerod V	Sweden	N W Agerods mosse	I
Aggarps mosse	Sweden	Svedala	I
Aggersund	Denmark	Limfjord region	C
Airthrey	Scotland	Burnbank	C
Akonge	Denmark	Amosen	I
Alajarvi	Finland	Kurejoki	C
Alavus-Rautalanvainio	Finland	Rautalanvainio	C
Alavus-Vasikkahaka	Finland	Visikkahaka	C
Alby	Sweden	E Oland	I
Ale Syd	Denmark	N Jutland, Bjornsholm fjord	C
Ale Nord	Denmark	N Jutland, Bjornsholm fjord	C
Allersbog	Denmark	E Zealand, Nr Vedbaek	C
Almeo	Sweden	Lake Hornborgasjon	I
Altrasket	Sweden	Bay of Bothnia	C
Amrum	Germany	island, North-west	C
Angsnes	Norway	Varanger Fjord	C
Annerod	Sweden	South-west	C
Antrea	Finland	Lake Lagoda, Viborg	I
Appels	Netherlands	South-west	I
Araguina-Sennola	Corsica	Bonifacio	C
Arapouco	Portugal	Sado River mouth	C
Argus	Denmark	Smaland Bight	C
Arhus	Denmark	Jutland	I
Arlov I	Finland	Askola	C
Askola	Finland	Nalkkila	I
Asted Enge	Denmark	Limfjord region	C
Aveline's Hole	England	South	I
Backaskog	Sweden	Klaby Parish, Scania	C
Baile Herculane	Romania	Danube, Iron Gates	I
Balltorp	Sweden	South-west	C
Ballyholme	Ireland	Co Down	U*
Balma Margineda	Spain	Pyrenees	I
Bare Mosse	Sweden	Scania	I
Barleben	Germany	Wolmirstedt region	I
Barmose	Denmark	S Zealand	I
Barnewitz	Germany	North-west, Nr Karthaus	I
Barnow	Poland	Pomerania	I
Battersea	England	River Thames	I
Bernaufels Cave	Germany	Swabian Alb	I
Bethune	France	Artois	I
Birkemose	Denmark	Zealand	I
Birsmatten	Switzerland		I
Bize, Petite Grotte	France	Aude, W Languedoc	I
Bize, Grande Grotte	France	Aude, W Languedoc	I
Bjeresjo	Sweden	Scania	I
Bjornsholm	Denmark	Limfjord inlet, N Jutland	C
Blair Drummond	Scotland		C
Blegkilde	Denmark	Aalborg Jutland	C
Bloksbjerg C/D	Denmark	Zealand	C
Bloksbjerg E/F	Denmark	Zealand	C
Bloksbjerg	Denmark	Zealand	C
Bogge II	Norway		C
Bornholm	Denmark	island	I

Table 6.1a (contd)

Site	Country	Location	Shoreline at occupation
Bothildenslunds	Sweden	Scania	I
Brabrand	Denmark	E Jutland	C
Brandenburg	Germany	Brandenburg District	I
Brandesburton	England	nr River Hull	I
Bredasten	Germany		U*
Brodersby	Germany	Nr Eckernförde, Schleswig Holstein	I
Bua Vastergard	Sweden	large island (2km sq), at Got River mouth	C
Bussjo mosse	Sweden	Bromma	I
Cabeco da Armoreira	Portugal	70km from coast, River Tagus	C
Cabeco da Arruda	Portugal	70km from coast, River Tagus	C
Cabeco de Pez	Portugal	Sado Valley	I
Calbe	Germany	Nr Stendal, Saxony	I
Calowanie	Poland		I
Carstenminde	Denmark	Gislinge Lammefjord: Zealand	C
Casteal nan Gillea I	Scotland	Oronsay	C
Casteal nan Gillea II	Scotland	Oronsay	C
Castelejo	Portugal	rocky shore midden	C
Castillo	Spain	Santander	I
Causewayhead	Scotland		C
Charlottenlund	Denmark		I
Cingle Vermell	Spain	Catalonia	I
Cirutado Casal Papagato	Portugal	30km from coast	I
Climente	Romania	Iron Gates	I
Clonava	Ireland	island in Lough Deravarragh, Co Westmeath	I
Cnoc Coig	Scotland	Oronsay	C
Cnoc Sligeach	Scotland	Oronsay	C
Copenhagen	Denmark		I
Couze	France		I
Cranz	Germany	Kalliningrad, E Baltic	C
Creswell	England		I
Crouzade	France	Aude, Languedoc	I
Cueva de Nerja	Spain	South-east	C
Cuina Turcului I	Romania	Danube, Iron Gates	I
Cuina Turcului II	Romania	Danube, Iron Gates	I
Culoz	France	Gramat, Haut Quercy	I
Curran Point	Ireland	Larne	C
Cushenden	Ireland	Co. Antrim	C
Cyclops Cave	Greece	Sporades Island	C
Dalkey Island II	Ireland	Leinster, small island	C
Dalkey Island V	Ireland	Leinster, small island	C
Dammen	Sweden	large island (5km sq)	C
Daviekanovo	Russia	Bashkirskaia	I
Deviete	Latvia		I
Dietfurt Cave	Germany	Danube, Swabian Alb	I
Dinslaken	Germany	Dusseldorf district	I
Djursnas	Sweden	Osmo, Sodermanland	C
Dobbertin	Germany	Mecklenburg	I
Dohren	Germany	River Leine	I
Drosselholm	Denmark	Aamose: Zealand	I
Druimvargie	Scotland	rockshelter	C
Dudka	Poland	Masuria	I
Dummersee	Germany	Hanover	I
Dunmore	Scotland		C
Duvensee	Germany	Nr Lubeck	I
Dyrholm	Denmark	islet, E Jutland	I
Earls Barton	England		I
Eckersdorf	Germany	East Prussia	I
Egsminde	Denmark	N Jutland, Bjornsholm fjord	C
El Pendo	Spain	Santander	C
Elbing	Poland	Nr Wisla River	I
Ellemose	Denmark	Zealand	I
Ellerbek	Denmark	Satrup bog, South Jutland	C
Emmererfscheidenveen	Netherlands		C
Emmersboek	Denmark	Jutland	I
Ermilia	Spain	Guipuzcoa	I
Erslev Kaer	Denmark	Limfjord, N Jutland	C
Ertebolle	Denmark	Limfjord, N Jutland	C
Esperods Mose	Sweden	Tranas, Scania	I
Europoort	Netherlands	West of Rotterdam: Maasvlakte region	S
Evenhus	Norway	West	C
Faareveile	Denmark	Zealand	C
Falkensteinhöhle	Germany	Danube, Swabian Alb	I

Table 6.1a (contd)

Site	Country	Location	Shoreline at occupation
Fals Mosse	Sweden	Scania	I
Fannerup	Denmark	Jutland	I
Fat'ma-Koba	Ukraine	Crimea	C
Faurelie II	France	Manaurie River, Perigord	I
Federsee	Germany	Federsee	I
Felsstalle	Germany	Danube tributary, Swabian Alb	I
Ferifers Cove	Ireland	Dingle Peninsula, Co Kerry	C
FerneWerder	Germany	W Havelland, Nr Brandenburg	I
Fiais	Portugal	Nr Vidigal	C
Fienerode	Germany	Saxony	I
Fiskerhuset 2	Denmark	Karrebaek Dybso fjord	C
Fiskerhuset 6	Denmark	Karrebaek Dybso fjord	C
Fiskerhuset 92	Denmark	Karrebaek Dybso fjord	C
Fjellenstrup	Denmark	small island on fjord between Kattegat & Soborg Lake, Zealand	C
Flatow	Germany	Pomerania, North-east	I
Flynderhage	Denmark	Norsminde fjord, E Jutland	C
Folenhaus	Germany	Swabian Alb	I
Fohr	Germany	island, Schleswig Holstein	C
Forslev	Norway	West	C
Forth Valley	Scotland		C
Franchthi - Phase D	Greece	Argolid	C
Frebergsvik B	Norway	Borre, East	C
Frederiks Odde	Denmark	N Jutland, Norsminde fjord	C
Friarton	Scotland	Perth	I
Friesack	Germany	Potsdam, N E Germany	I
Froser Seelandereien	Germany	Nr Bernberg, Anhalt	I
Fucine Lake	Italy	Trento	I
Funen Island	Denmark	Fyn	C
Gamborg Fjord	Denmark		C
Gasen	Norway	Nr Stavanger	C
Gislause	Sweden	Gotland	C
Gislinge	Denmark	Lammefjord	C
Gneiwno	Poland	North-east	I
Godsted	Denmark	Lolland	C
Gohra-Worle	Germany	Nr Neustadt	I
Goldcliff	Wales	Severn Estuary	C
Gourris	France	Lespugue, Haute Garonne	I
Gorlev	Denmark	Zealand	I
Goyet Cave	Belgium	Namur, central Belgium	I
Gr-Steegan	uncertain		I
Gransmoor	England		I
Grena	Denmark	Jutland	I
Gressbakken	Norway	Varanger Fjord	C
Grisby	Denmark	Bornholm, Baltic Sea	C
Gronehelleren	Norway		C
Gropbakkeengen	Norway	Varanger Fjord	C
Grotta Erica	Italy	Salerno, Campania	C
Grotta la Porta di Positano	Italy	Salerno, Campania	C
Grotte de Pegourie	France	Caniac-du-Causse, Lot	I
Grotte des Harpons	France	Haute Garonne	I
Grotte Massat	France	Haute Garonne	I
Gudso Vig	Denmark	Kolding Fjord, Jutland	C
Gudumland	Denmark	Jutland	C
Gusev	Germany	E Baltic	C
Haiti-Myllypleto	Finland	Askola	I
Hajjarp	Sweden	Agerods mosse, Scania	I
Hallebygaard	Denmark	marsh, nr. Hallebaa River, Aamose, Zealand	I
Halsskov	Zealand	Slagelse	C
Hamme	Germany	Schleswig-Holstein	I
Hanger	Sweden	Kallstads, Ostergotland	I
Hardinxveld-Giessendam	Netherlands		I
Hassing Osterkaer	Denmark	Jutland	I
Hastefjorden	Sweden		C
Haubolle	Denmark	Langeland Island	C
Havelland	Germany	Brandenburg	I
Havelse	Denmark	Zealand	C
Havno	Denmark	E Jutland, small island	C
Heden	Sweden	Vasterbotten, Gulf of Bothnia	I
Helga Abri	Germany	Danube tributary, Swabian Alb	I
Helgenaeo	Denmark	Jutland	C
Henuhof Nord II	Germany	Federsee	I

Table 6.1a (contd)

Site	Country	Location	Shoreline at occupation
Henauhof Northwest Stratum 6	Germany	Federsee	I
Henauhof Northwest Stratum 5	Germany	Federsee	I
Henauhof Northwest Stratum 4	Germany	Federsee	I
Henauhof Northwest Stratum 3	Germany	Federsee	I
Henauhof Northwest II	Germany	Federsee	I
Henttala	Finland	Askola, Gulf of Bothnia	I
Herdangervidda - Hein 33	Norway	riverside	I
Herdangervidda - Langesjoen-1039	Norway	riverside	I
Herlufmagle	Denmark	Zealand	I
Hesselbjergaard	Denmark	Aamose: Zealand	I
Heusden	Netherlands		I
Hillerod	Denmark	N Zealand	I
Hinge So	Denmark	Jutland, Silkeborg	I
Hitzkirch-Seematt	Switzerland		I
Hjembaek	Denmark	Zealand	I
Hoedic	France	Brittany	I
Hofderup	Sweden	Scania	I
Hohen Viecheln	Germany	Mecklenburg	I
Hollandsvandet	Norway	Nr Stavanger	C
Holmegaard I	Denmark	island, S Zealand	I
Holmegaard IV	Denmark	island, S Zealand	I
Holmegaard V	Denmark	island, S Zealand	I
Honkajoki	Finland	Lauhala, Gulf of Bothnia	C
Hook of Holland	Netherlands	dredged	S
Hopeapello	Finland	Askola	I
Horne	Denmark	North Jutland	I
Horninge Mosse	Sweden	Oland Island: Ancyus Lake	I
Hornsea	Britain	Yorkshire	I
Horsensfjord	Denmark	Zealand	I
Hoybukt	Norway	Varanger Fjord	C
Huseby Klev	Sweden	island in inlet; freshwater stream	C
Husum	Germany		I
Hylteberga mosse	Sweden	Skurups	I
Icoana	Romania	Danube, Iron Gates	I
Ingelstad	Sweden	Nr Vaxjo, Scania	I
Inzigkofen	Germany	Schwabian Alb	I
Isbergues	France	River Laqua	I
Istaby	Sweden	Mjallby Blekinge, Scania	I
Isturitz	France	Landes	I
Jaegerspris	Denmark	Zealand	C
Jagersshohle	Germany	Swabian Alb: Upper Danube	I
Jara Bank	Sweden	Nr Limhamn, Malmo	C
Jaravallen	Sweden	Nr Limhamn, Malmo	C
Jonstorp	Sweden	Schonen	C
Jonstrup Vaenge	Sweden		C
Jordlose Mose II	Denmark	Aamose: Zealand	I
Kallingemose mosse	Sweden	Oland Island: Ancyus Lake	I
Kalundborg	Denmark	W Zealand	C
Kams	Sweden	Gotland	C
Kara-Koba	Ukraine	Crimea	I
Karby	Germany	Nr Eckernforde, Schleswig Holstein	I
Kassemosse	Denmark	Zealand	C
Kents Cavern	England		I
Kervara	Finland	Pisinmaki	I
Kildegaard	Denmark	Aamose: Zealand	I
Kildegaard Ost	Denmark	Aamose: Zealand	I
Ki Machnow	Germany	Nr Berlin	I
Klintesø	Denmark	Zealand	C
Klubba	Norway		C
Koldingfjord	Denmark	Jutland	C
Kolind I	Denmark	fjord: Jutland	C
Kongemosen	Denmark	Aamose: Zealand	I
Kongemosen V	Denmark	Aamose: Zealand	I
Kongsted	Denmark	Zealand	I
Konnu	Estonia	islet, south of Saaremaa 0.25 sq km	C
Kopu I	Estonia	terrace of Littorina Sea, W Hiiumaa Island	C
Kopu IV	Estonia	terrace of Littorina Sea, W Hiiumaa Island	C
Kopu VIII	Estonia	terrace of Littorina Sea, W Hiiumaa Island	C
Koster	Denmark	Moen	I
Kosuchen	Poland	lakeshore, near Lotzen	I
Kotedalen	Norway		C
Kourtane	Finland	Ylijoki	C

Table 6.1a (contd)

Site	Country	Location	Shoreline at occupation
Krampkewitz	Germany	Nr Lauenburg	I
Kulm	Germany	E Prussia	I
Kunda	Estonia	Lammasmagi island in lake: inshore lagoon	I
Kusserow	Germany		I
Kvernevik	Norway	Ytteroy, North Trondelag	C
La Haine	Belgium	central Belgium	I
La Paloma	Spain	Asturias	I
La Riera Asturian	Spain	Asturias	C
La Riera Azilian	Spain	Asturias	C
La Tourasse	France	Haute Garonne	I
La Vache	France	Ariege	I
Lachmirovice	Poland	Strzelno District	I
Lake Lubana	Latvia	lakeshore	I
Lammefjord	Denmark	fjord	C
Langeland Island	Denmark		C
Lango	Denmark	N Fyn	C
Laspi VII	Ukraine	Crimea	C
Lattmoor	Germany	Mecklenburg	I
Laugasen	Norway	Vega Islands	C
Laugerie Basse	France	Dordogne	I
Lautereck	Germany	Danube tributary, Swabian Alb	I
Le Trou Violet	France	cave	I
Leiknes	Norway		C
Leman/Ower	North Sea	dredged from sea floor	S
Lepenski Vir	Serbia	Danube, Iron Gates	I
Liesbergmuli 6	Switzerland	central Switzerland, Liesberg	I
Lille Knabstrup	Denmark	Holbaek district, Zealand	C
Lille Loshult	Sweden	peat bog	I
Lillebaelt	Denmark		C
Limhamn	Sweden	Malmo	C
Lindholm I	Great Belt	Fyn - Zealand	C
Lippe	Germany	N Wesfalen	I
Loddesborg	Estonia	Torma	I
Lohusu	Estonia	Torma	I
Lojesmolle	Denmark	Aamose: Zealand	I
Longueroché	France	Dordogne	I
Loona	Estonia	Naa Kamae	C
Lorby	Sweden		I
Lorthet	France	Haute Pyrenees	I
Lough Boora	Ireland	lake	I
Los Azules I	Spain	confluence of Rivers Guena & Sella, Asturias	I
Lumentxa	Spain	Vizcaya	C
Lundfors	Sweden	Vasterbotten coast	C
Lundfors A	Sweden	Vasterbotten coast	C
Lundfors B	Sweden	Vasterbotten coast	C
Lundgard	Denmark	N Jutland	C
Lystrup I	Denmark	Jutland, N coast of Ege fjord inlet	C
Lystrup Enge	Denmark	Jutland, N coast of Ege fjord inlet	C
MacArthurs Cave	Scotland	Oban	C
Magdeburg	Germany	River Elbe	I
Magleo	Denmark	Aamose: Denmark	I
Magoito	Portugal	Sado Valley	C
Maisieres	France		I
Malerfels	Germany	Schwabian Alb	I
Marietorp	Sweden	Smedstorp	I
Marievka	Ukraine	Dneiper rapids	I
Marzenin	Poland	Wikowo District	I
Mas D'Azil	France	Ariege	I
Mazaculos	Spain		C
Mechelen	Belgium	Demer River	I
Mecklenburg	Germany		I
Meiendorf	Germany		I
Meiklewood	Scotland		C
Meilgaard	Denmark	Jutland	C
Melle	Belgium		I
Mendrienen	Poland	E Prussia	I
Menturren	USSR	Northeast	I
Mitteldorf	Germany	Nr Mohrunen W Prussia	I
Mjallby mosse	Sweden	Blekinge	I
Moen	Denmark	island	C
Moita do Sebastiao	Portugal	Tagus estuary	C
Molara Cave	Italy	Palermo, Sicily	C

Table 6.1a (contd)

Site	Country	Location	Shoreline at occupation
Mollegabet I	Denmark	N Aero Island, Fyn	C
Mollegabet II	Denmark	N Aero Island, Fyn	C
Monster	Netherlands	W Rotterdam	S
Montclus	France	Ceze River	I
Monte Leone	France	Bonifacio, South Corsica	C
Montfort	France	Ariege	I
Morgi	Poland	Lida District	I
Morin	Spain	Santander	I
Morke Enge	Denmark	N Amosen, Zealand	I
Morton A	Scotland		C
Morton B	Scotland		C
Mount Sandel	Ireland	Lower River Bann Valley	I
Muge	Portugal	Tagus estuary	C
Muldbjerg	Germany	Anhalt	I
Mullerup	Denmark	Zealand	I
Multorp	Sweden	Bohuslan	I
Murzak-Koba	Ukraine	Crimea	I
Musholm Bay	Denmark	Great Belt: Fyn & Zealand	C
N f Lilleo	Denmark	Aamose: Zealand	I
Naa Kamae	Estonia		C
Naebbet	Sweden	Skjoldnaes	I
Narpes	Finland	Osterbotten	C
Narva	Estonia	left bank of river Narva	I
Nasebyholm	Sweden	S W Scania	U
Nebbe Mosse	Sweden	Lake Gyllebosjon, Schonen, S E Scania	I
Nederst	Denmark	Kolundund island, Jutland	C
Nekselo	Denmark	Bornholm	C
Neu Jucha	Poland	Nr Lyck, E Prussia	I
Neu Strelitz	Germany	Mecklenburg	I
Neught	Poland	E Prussia	I
Newferry	Ireland	Bann Valley	I
Nidlose	Zealand	Aamose	I
Ninove	Belgium	Dendre River	I
Nitki	Poland		I
Nivaa	Denmark	Zealand	C
Nivagaard	Denmark	Zealand	C
Nizhnee Veret'e	Russia	River Kinem, nr Lake Lacha inlet, S E Lake Onega	I
Nizhnee Veret'e I	Russia	River Kinem, nr Lake Lacha inlet, S E Lake Onega	I
Noddekonge	Denmark	Amosen	I
Nolgarden	Sweden	Vastergotland	I
Nord de Bruxelles	Belgium		I
Norrkopping	Sweden	Ostergotland	C
Norslund	Denmark	N Jutland, Norsminde fjord	C
Norsminde	Denmark	N Jutland, Norsminde fjord	C
Novgorod	Russia	Lake Ozero Ilmen	I
Nowa	Poland	Erekcja: Bydgoszes district	I
Noyen-sur-Seine	France	Paris Basin	I
Nyelve Nedre Ost - Lossoa's Hus	Norway	sheltered s coast of inner fjord	C
Nyelve Nedre Vest	Norway	sheltered s coast of inner fjord	C
Obourg	Belgium		I
Odense	Denmark	Fyn	I
Odmut	Montenegro		I
Odsherred	Sweden	Scania	I
Offerdals	Sweden	Jamtland	I
Ogaarde	Sweden	Amosen: 16km from coast	I
Olby Lyng	Denmark	E Zealand	C
Oleni Ostrov	Russia	Deer Island cemetery Lake Onega, Karelia	I
Olmanas	Sweden	sheltered side of island (4 sq km)	C
Orebro	Sweden	Hjalmaren Lake	C
Orelunds Mose	Denmark	Aamose: Zealand	I
Ornskoldvik	Sweden	Angermanland, Gulf of Bothnia	C
Oslo	Norway		C
Ossowo	Poland	Bydgoszcz	I
Osterkaer	Denmark	sand bar: island off coast of Littorina Sea	C
Ostroleka	Poland	Narew River	I
Ostruvul Banului	Romania	Danube, Iron Gates	I
Ostrovul Mare	Romania	Danube, Iron Gates	I
Oulu	Finland	Osterbotten	C
Oxie	Sweden	Scania	I
Padina I	Serbia	Iron Gates	I
Pandeiro	Portugal	Toledo	C
Paris	France		I

Table 6.1a (contd)

Site	Country	Location	Shoreline at occupation
Peitschendorf	Poland	Sensburg E Prussia	I
Penken	Germany		I
Pentekinnen	Poland	NrFischausen E Prussia	I
Perkallen	Poland	E Prussia	I
Pernau	Estonia	Lower Pernau River	I
Pesse	Netherlands		I
Pietracorbara	France	Corsica	I
Pihlsten	Denmark/Sweden	sound between Denmark & Sweden	C
Pobiel 10	Poland	River Orla, Slask	I
Pocas de Sao Bento	Portugal	Sado Valley	I
Pommeroeul	France		I
Pont D'Ambon	France	River Dronne, Perigord	I
Porsemose	Denmark	Zealand	I
Porth-y-waen	England	Shropshire	I
Porvoo	Finland	Henttala	C
Poullton-le-Flyde	England	Lancashire	I
Praestelyngen	Sweden	Amosen	I
Praseto	Denmark	South Zealand	C
Priestermoor	Germany	Nr Duvensee	I
Priory Midden	Scotland	Oronsay	C
Pulli	Estonia	mouth of River Parnau	C
Rabelovsjon	Sweden	Blekinge	I
Rahkaissuo	Finland	Askola	I
Raklev	Denmark	Zealand	I
Randers	Denmark	Jutland, nr fjord	I
Rascano	Spain	Santander	I
Reddies	Germany	Pomerania	C
Reilhac	France	Haut Quercy	I
Rerslev	Denmark	Amosen	I
Retschwil-Stafligen II	Switzerland		I
Rheinbalm	Germany	Kobach	I
Rhodes II	France	Haute Garonne	I
Ringkloster	Denmark	Lake Skanderborg So	I
Ringsjon	Sweden	Scania	I
Ringsted	Denmark	Jutland	I
Riparo Blanc	Italy	Latina, Lazio	C
Risga	Scotland	island	I
Rochedane	France		I
Rochfort	France	Aunis	I
Rockmarshall	Ireland	east coast	C
Rodoy	Norway		C
Rogaland	Norway		I
Romagnano	N Italy	Trento, Adige Valley	I
Romeiras	Portugal	Sado Valley	C
Romsey	England	River Test, Hants	I
Ronaes Skov	Denmark		C
Ronneholms mosse	Sweden		I
Rorvik	Sweden	South-west	C
Rosenhof	Germany		C
Rottjarnslid	Sweden	Dragsmark, Bohuslan,	C
Rotterdam-Bergschenhoek	Netherlands		C
Royston	England	Hertfordshire	I
Rude II	Germany	Forstermoor, Schleswig	I
Rugen	Germany	island, Baltic Sea	I
Ruthenie	Poland	Potwiecie, Wotkowysk District	I
S Kotopelto	Finland	Askola	I
Saarijarvi	Finland	Tarvaala	I
Salies du Salat	France	Haute Garonne	I
Salitre	Spain	Santander	I
Samouqueira	Portugal		C
Sanda	Norway	island	C
Sandhuse Mose	Denmark	Aamose:Zealand	I
Sandlyng Skov	Denmark	Aamose:Zealand	I
Sao Juliao	Portugal	Sado Valley	C
Saroki	Moldova	Dneistr River	I
Satrup	Denmark	South Jutland	I
Saunapello-Perunamaa	Finland	Askola	I
Schela Caldovei	Romania	Danube, Iron Gates	I
Schlusbeker Moor	Germany	Gem. Moorsee	I
Scholz	Switzerland	Scholz, central Switzerland	I
Schoonaerde	Netherlands		I
Seamer Carr	England		I

Table 6.1a (contd)

Site	Country	Location	Shoreline at occupation
Segebro	Sweden	Rinsjo Lake Basin, Agerods mosse	C
Sejro	Denmark	Zealand	C
Shewalton	Scotland		I
Shirgirskiy	Russia	Middle Transurals	I
Siedlung Forscher	Germany	Federsee	I
Siggard	Denmark	N Jutland, Bjornsholm fjord	C
Siggeneben Sud	Germany		C
Siiversti	Estonia	inlet of Gulf of Finland, Narva Region	I
Silkeborg So	Denmark	Jutland	I
Siltapellonhaka	Finland	Askola	I
Siltapellonhaka II	Finland	Askola	I
Siretorp	Sweden	Mjalby, Blekinge	I
Sjalko	Sweden	Blekinge, Scania	I
Sjodiken	Sweden	Scania	U*
Sjoholmen	Sweden	Ronne River outlet at w Ringsjo Lake: Ronneholm bog	I
Skaftelev	Denmark	Slagelse, Zealand	I
Skalstrup	Denmark	Zealand	I
Skane	Sweden		U*
Skateholm I	Sweden	Baltic lagoon	C
Skateholm II	Sweden	Baltic lagoon	C
Skellingsted Bro	Denmark	Aamose: Zealand	I
Skellingsted Mose Nord	Denmark	Aamose: Zealand	I
Skipsea	England	Yorkshire	I
Skipshelleren - 6	Norway	fjord at mouth of River Voss	C
Skjoldnaes	Denmark	Aero	C
Skottemarke	Denmark	Lolland	I
Skurups	Sweden	Scania	I
Slagelseegnen	Denmark	Slagelse, Zealand	I
Smaland Bight	Denmark	Great Belt: Fyn & Zealand	C
Soborg Lake	Denmark	N Zealand	I
Soborg So	Denmark	N Zealand	I
Soholm	Denmark	Zealand	I
Solager	Denmark	Zealand	C
Sonderholm	Denmark	Karlsunde bog: E Zealand	C
Sonderod	Denmark	Aamose, Zealand	I
Sorbehnen	Germany	E Prussia	I
Spiginas	Lithuania	island in Lake Birzulis	I
Spitalhohle	Germany	Danube, Schwabian Alb	I
Spjalko	Sweden		I
Sproughton I	England	Nr Ipswich	I
Sproughton II	England	Nr Ipswich	I
Stammestad	Denmark	West Zealand	C
Star Carr	England	outlet of freshwater lake	I
Stellmoor	Germany		I
Stensballe Sund	Denmark	East Jutland	C
Stirling-Cow-Park	Scotland	Fife	C
Stokkeborg	Denmark	Northwest Zealand	I
Stora Bjers	Sweden	Gotland	I
Stora Dode mosse	Sweden		I
Stora Forvar-Stora Karlo	Sweden	island: nr. Gotland	C
Store Vildmose	Denmark	Jutland	I
Strand	Norway	Nord-Trondelag	C
Strandegaard	Denmark	Zealand	C
Stryno Basin	Denmark		C
Sutton	Ireland	east coast	C
Svaerdborg I	Denmark	S Zealand	I
Svaerdborg II	Denmark	S Zealand	I
Svedstrup	Denmark	Zealand	I
SvinningeVeijle	Denmark	Zealand: large shallow bay	C
Szirguponen	Germany	Nr Gumbinnen, East Prussia	I
T Ruoksmäa	Finland	Askola	I
Taaderup	Denmark	Falster	I
Tallikaaro	Finland	Askola	I
Tange	Denmark	River Gudena, Jutland	I
Tannstock	Germany	Federsee nr Wurttemberg	I
Tarvastu	Estonia		I
Tashkovo IV	Kazhakstan	Forest Steppe Urals	I
Tatsum So	Denmark	lakeshore, Jutland	I
Teviec	France	Brittany	I
Thatcham	England	Berkshire	I
Tingbjergaard	Denmark	Aamose: Zealand	I
Tisso	Denmark	Zealand	I

Table 6.1a (contd)

Site	Country	Location	Shoreline at occupation
Tjikkitrask	Sweden	Southern Lappland	I
Tjorn	Sweden	Bohuslan	I
Tlokowo	Poland	Olstzyn district	I
Toppinen	Finland	Askola	I
Torkop	Norway	Ostfold	C
Torning	Germany	Schleswig Holstein	I
Torup	Sweden		I
Torvala	Estonia	right bank of River Narva	I
Travenort	Germany	Schleswig Holstein	I
Trorod	Denmark	Zealand	I
Tuboek Molle	Denmark		I
Tybrind Vig	Denmark	Zealand	C
Ulkestrup	Denmark	Zealand	I
Ulkestrup I	Denmark	Zealand	I
Ulkestrup II	Denmark	Zealand	I
Ulkestrup IV	Denmark	Zealand	I
Ulslev	Denmark	Zealand	I
Umbusi	Estonia		I
Undlose Bro	Denmark	Aamose: Zealand	I
Undsted	Denmark	Jutland	I
Urtiaga	Spain	Guipuzcoa	I
Uzzo Cave	Italy	Trapani, Sicily	C
Vaalse Vig	Denmark	Falster	I
Vaby	Sweden	Blekinge	I
Vadsted	Denmark	Jutland	I
Vaenge So	Denmark	small bay/shallow lagoon	C
Valle, Norway	Norway		C
Valle, Spain	Spain	Santander	I
Vandlose	Denmark	Amosen	I
Varanger	Norway	Fjord	C
Vasterbjers	Sweden	Gotland	C
Vedbaek Boldbaner	Denmark	Oresund inlet	C
Vedbaek Henriksholm Bogebakken	Denmark	N coast Oresund inlet	C
Vedbaek Magleholm	Denmark	inner Oresund inlet	C
Vedbaek Maglemosegard	Denmark	south coast Oresund inlet	C
Vedbaek Maglemosegards Vaenge	Denmark	south coast Oresund inlet	C
Vedbaek Stationsvej19	Denmark	island: mouth of Oresund	C
Vedbaek Vaenget Nord	Denmark	south coast Oresund inlet	C
Vejby	Denmark	Zealand	I
Vejle Lake	Sweden		I
Vejlbro	Denmark	Zealand	C
Vejleby	Denmark	Zealand	C
Vente	Denmark	Zealand	C
Verup Mose	Denmark	Aamose: Zealand	I
Vester Ulslev	Denmark	Zealand	I
Vibygaard	Denmark	Zealand	I
Vidigal	Portugal	Alentejo: open air site	I
Viken Lake	Sweden		I
Villespy	France	Aude, W Languedoc	I
Villingebaek	Denmark	North Zealand	C
Vinde-Helsing Mose	Denmark	Aamose: Zealand	I
Vinkel Mosse	Denmark	near Viborg, N Zealand	I
Virksund	Denmark	Jutland	C
Vis I	Russia	confluence of rivers Simba & Vis: nr Lake Sindor	I
Viste	Norway	Stavanger	C
Vlasac	Serbia	Danube, Iron Gates	I
Vollersgard	Denmark	Bjornsholm fjord, N Jutland	C
Wachfelsen	Switzerland	Grellingen, central Switzerland	I
Waltham	England	Essex	I
Wandsworth	England	River Thames	I
Waren	Germany	Mecklenburg	I
Wendhausen	Germany	Nr Hildesheim, Hanover	I
West Carse	Scotland		C
Wetzikon-Robenhausen	Switzerland		I
Wichelen	Belgium	River Escaut, Flanders	I
Willebroek	Netherlands		I
Wilsleben	Germany	Nr Aschersleben, Anhalt	I
Wisla	Poland	River Vistula, Nr Fordon	I
Yderhede	Denmark	lagoon separated from sea by island	C
Ystad	Sweden	Scania	C
Zalavonga	Russia	White Sea coast, Karelia	C
Zalavuga	Russia	White Sea coast, Karelia	C

Table 6.1a (contd)

Site	Country	Location	Shoreline at occupation
Zalesie	Poland	Szubin District	I
Zamoszje II	Russia	central Russia, Dubna River - Volga trib.	I
Zelee	Netherlands		I
Zigeunerhohle	Germany	Hausberg	I
Zulphen-Ooijerhock	Netherlands		I
Zvejnieki	Latvia	Lake Burtnieku at mouth of River Ruja	I
Zvidze	Latvia	Smaudzhi, n.w. Lake Lubana	I

* C- Coastal; I - Inland

Table 6.1b Site Type, Date and Occurrence of Fishing Related Finds

Site	Site type	Date	Fishing Implements	Fish Remains	Sea Mammals	Aquatic Birds	Other Aquatic Resources	Shellfish
Aamolte	midden	Mesolithic/Neolithic mixed			p			p
Abri Cornille	cave - settlement - multiple component	c. 9000-9750 BP	p					
Abri de Chinchon	cave - settlement - multiple component	Early Mesolithic	p					
Abri du Pape	riverside rockshelter, at river confluence	8817±85 - 7843±85 BP*		p			p	p
Acy	unassociated find	Early Mesolithic	p					
Advik	settlement - multiple component	c. 4950-4050 BP & 3820-3350 BP*	p	p		p	p	p
Aero	submerged settlement & refuse layer	c. 6100 BP*	p	p	p			
Agemaes	settlement	Late Mesolithic	p					
Agerod Ib	lake shore settlement - single component	6040±70 - 6380±70 BP		p				
Agerod Id	settlement, 30km from lakeshore - single component	7630±80 - 7940±80 BP	p	p				
Agerod I:HC	lake shore settlement - single component	7770±80 - 7970±80 BP	p	p	p	p	p	
Agerod V	lake shore settlement - single component	6540±75 - 6800±90 BP	p	p				
Aggarps mosse	isolated find from bog	8360±90 BP*	p					
Aggersund	midden on inland sea - single component - winter	5420±95 - 5460±95 BP	p			p		p
Airthrey	kill site	c. 4950-6450 BP			p			
Akonge	lakeshore midden, settlement & offshore refuse	Mesolithic/Neolithic mixed		p				p
Alajarvi	settlement	Late Mesolithic					p	
Alavus-Rautalanvainio	settlement	Late Mesolithic			p			
Alavus-Vasikkahaka	settlement	Late Mesolithic				p	p	
Alby	specialised extraction camp? island too small for permanent occupation	c. 7150 BP	p		p			
Ale Syd	midden	5720±95 - 5160±70 BP						p
Ale Nord	midden	5680±70 BP						p
Ailersbog	capsize/burial	Late Meso/Early Neo	p					
Almeo	seasonal (winter-spring) island settlement	c. 9200-8900 BP		p				
Altrasket	island, beach terrace settlement	Mesolithic*			p			
Amrum	island shoreline, isolated find	Early Mesolithic	p					
Angsnes	settlement	Mesolithic		p	p	p	p	
Annerod	midden	Late Mesolithic		p				p
Antrea	lakeshore settlement	9230±210 BP	p					
Appels	unassociated find	Early Mesolithic	p					
Araguina-Sennola	shoreline cave - settlement - multiple component	8520±150 BP*		p	p	p		p
Arapouco	estuarine midden	Late Mesolithic		p				p
Argus	submerged settlement	c. 6850 BP		p	p	p	p	
Arhus	unassociated find	Early Mesolithic	p					
Arlov I	settlement	Late Mesolithic		p	p	p	p	
Askola	rivershore settlement	Late Mesolithic		p	p	p	p	
Asted Enge	inland sea settlement	Mesolithic/Neolithic mixed			p			
Aveline's Hole	cave - settlement - multiple component	12,380±130 BP	p					
Backaskog	female burial (40-50 years) with grave goods grave carved into sea cliff (120cm deep, 60cm diameter)	Late Mesolithic	p					
Baile Herculane	riverside cave - settlement - multiple component	Early Mesolithic		p				p
Balltorp	transgressed settlement mainland sound, deep water 10-15m at 5km	9080±110 - 8265±120 BP*		p	p	p		
Ballyholme		Late Mesolithic	p					
Balma Margineda	cave - settlement - multiple component, 1000m a.s.l.	Early Mesolithic		p				
Bare Mosse	peat bog, isolated find	Early Mesolithic	p					
Barleben	settlement	Mesolithic/Neolithic	p					p
Barmose	site	c. 8250 BP	p					
Barnowitz	isolated find	Early Mesolithic	p					
Barnow	peat bog, isolated find	Early Mesolithic	p					
Battersea	isolated find, dredged from river	Early Mesolithic	p					
Bernaufels Cave	cave - settlement - multiple component	Early Mesolithic	p					
Bethune	peat bog, unassociated find	Early Mesolithic	p					
Birkemose	peat bog, unassociated find	Early Mesolithic	p					
Birsmatten	river valley rockshelter, settlement - multiple component	c. 8950-6000 BP*	p	p		p	p	
Bize, Petite Grotte	cave - settlement - multiple component	Early Mesolithic	p					
Bize, Grande Grotte	cave - settlement - multiple component	Early Mesolithic	p					
Bjersjö		Early Mesolithic	p					
Bjornsholm	midden & settlement - single component	6090±100 - 4690±90 BP	p	p	p	p		p
Blair Drummond	kill site	c. 4950-6450 BP			p			
Blegkilde	settlement	Mesolithic			p			
Bloksbjerg C/D	settlement - single component	c. 5550-5750 BP	p	p				
Bloksbjerg E/F	settlement - single component	c. 5750-6450 BP		p				
Bloksbjerg	settlement	Late Mesolithic			p			
Bogge II	rock engraving	Mesolithic/Neolithic	p					
Bornholm	peat bog, unassociated find	Early Mesolithic	p					
Bothildenslunds	peat bog, unassociated find	Early Mesolithic	p					
Brabrand	lakeshore at river outlet, settlement - single component	5500±75 BP	p		p			

Table 6.1b (contd)

Site	Site type	Date	Fishing Implements	Fish Remains	Sea Mammals	Aquatic Birds	Other Aquatic Resources	Shellfish
Brandenburg	lakeshore, unassociated finds	Early Mesolithic	p					
Brandesburton	gravel ridge, unassociated find	Early Mesolithic	p					
Bredasten	settlement	Late Mesolithic		p	p		p	
Brodersby	unassociated find	Early Mesolithic	p					
Bua Vastergard	seasonal settlement (winter?) - single component deep water in immediate locality	c. 6385-7685 BP	p	p	p	p	p	p
Bussjo mosse	peat bog, isolated find	Early Mesolithic	p					
Cabeco da Amoreira	estuarine midden - multiple component	6050±300 - 7030±350 BP		p				p
Cabeco da Arruda	estuarine midden - multiple component	5210±300 - 6430±300 BP*		p				p
Cabeco de Pez	midden & cemetery	Late Mesolithic						p
Calbe	peat bog site	Early Mesolithic	p	p				
Calowanie	seasonal (late spring) settlement	Early Mesolithic		p				
Carstenminde	settlement-single component	c. 7450 BP	p	p				
Castal nan Gilleán I	midden - single component	6190±80 - 5450±50 BP*	p	p	p		p	p
Castal nan Gilleán II	midden - single component	5850±310 - 5150±380 BP*		p	p	p		p
Castelejo	midden - multiple component	8220±120 BP						p
Castillo	cave - settlement - multiple component	10,310±120 BP*	p					
Causewayhead	kill site	c. 4950-6450 BP			p			
Charlottenlund	unassociated find	Early Mesolithic	p					
Cingle Vermell	rockshelter, settlement & burials - multiple component	9760±160 BP*		p				p
Cirutado Casal Papagato	midden	Mesolithic						p
Clemente	cave - settlement - multiple component	Early Mesolithic	p					
Clonava	settlement	5360±110 BP*						p
Cnoc Coig	settlement, midden - single component	5430±130 - 5645±80 BP*	p	p	p		p	
Cnoc Sligeach	settlement, midden - single component	5015±210 - 5755±180 BP*	p	p	p		p	p
Copenhagen	unassociated find	Early Mesolithic	p					
Couze	occupation layers	c. 11,500-10,000 BP		p				
Cranz	unassociated find	Mesolithic	p					
Creswell	cave - settlement - multiple component	Mesolithic/Neolithic mixed	p					
Crouzade	cave - settlement - multiple component	Early Mesolithic	p	p		p		
Cueva de Nerja	rockshelter - settlement	Early Meso-Neo		p				
Cuina Turcului I	cave - settlement	10,600±120 - 10,200±120 BP*		p			p	
Cuina Turcului II	cave - settlement	8950±200 BP*	p	p			p	
Culoz	rivershore settlement	9150±160 - 7360±180 BP*	p	p				
Curran Point		Late Mesolithic			p			
Cushenden	midden - multiple component	7395±65 - c. 7950 BP		p				p
Cyclops Cave	cave - settlement - multiple component	c. 10,000 BP	p	p	p			p
Dalkey Island II	midden	mid 6th mill BP		p	p			p
Dalkey Island V	midden	Late Mesolithic		p	p	p		p
Dammen	shell bank settlement (water 55m within 1km)	8600±80 - 7645±80 BP*	p	p	p	p	p	p
Davlekanovo	settlement	Mesolithic	p					
Deviete	lakeshore hunting camp	Late Glacial	p					
Dietfurt Cave	cave - settlement	Late Palaeo-Early Meso	p	p				p
Dinslaken	settlement	9450±105BP*						
Djursnas	isolated find, Litorina clay	Late Mesolithic	p					
Dobbertin	lakeshore, unassociated find	Early Mesolithic	p					
Dohren	unassociated find dredged from river	Early Mesolithic	p					
Drosselholm	peat bog, small site	Mesolithic/Neolithic mixed		p				
Druimvargie	midden, cave	8340±80 - 7810±90 BP*	p	p				p
Dudka	lakeshore settlement	8750±150 - 5550±70 BP*		p			p	
Dummersee	unassociated find, dredged from lake	Early Mesolithic	p					
Dunmore	stranding	c. 4950-6450 BP			p			
Duvensee	peat bog settlement	Early Mesolithic	p					
Dyrholm	seasonal (autumn/winter) settlement-multiple component	c. 5750-6350 BP	p	p				
Earls Barton	unassociated find	9240±160 BP*	p					
Eckersdorf	terrestrial hunting camp	Late Glacial	p					
Egsminde	midden	5620±100 BP						p
El Pendo	cave - settlement - multiple component	Early Mesolithic	p					
Elbing	unassociated find	Early Mesolithic	p					
Ellemose	peat bog, unassociated find	Early Mesolithic	p					
Ellerbek	peat bog settlement	Mesolithic/Neolithic mixed	p		p			
Emmererfscheidenveen	isolated find	Early Mesolithic	p					
Emmersboek	peat bog, unassociated find	Early Mesolithic	p					
Ermilia		Early Mesolithic	p					
Erslev Kaer	shoreline settlement, inland sea	Mesolithic/Neolithic mixed			p			
Ertebolle	midden & settlement - multiple component	5110±100 - 5760±100 BP	p	p	p			
Esperods Mose	peat bog, kill site	c. 8650-9350 BP	p					
Europoort	isolated finds in land reclamation inland at time of occupation?	c. 9950-8060 BP*	p					
Evenhus	rock engraving	Mesolithic-Neolithic	p					

Table 6.1b (contd)

Site	Site type	Date	Fishing Implements	Fish Remains	Sea Mammals	Aquatic Birds	Other Aquatic Resources	Shellfish
Faareveile	midden	Mesolithic/Neolithic mixed	p	p				p
Falkensteinhöhle	riverside cave - settlement - multiple component	c. 7820±120 - 7540±120 BP*	p	p			p	p
Fals Mosse	peat bog, unassociated find	Early Mesolithic	p					
Fannerup	midden	Late Mesolithic			p			p
Fat'ma-Koba	settlement	Late Mesolithic			p			
Faurelle II	riverside cave - settlement - multiple component	Early Mesolithic	p					
Federsee	isolated find	Early Mesolithic	p					
Felsstalle	rockshelter, seasonal settlement (summer/autumn)	8190±90 BP	p	p			p	
Feriters Cove	middens & hearths, rocky shoreline	c. 7500-7000 BP	p	p				
Fernwerder	settlement - single component	c. 7750-8750 BP	p					
Fiais	estuarine midden, 10km from coast	7010±70 to 6180±110 BP		p				p
Fienerode	unassociated find	Early Mesolithic	p					
Fiskerhuset 2	islet settlement	Late Mesolithic		p	p			
Fiskerhuset 6	sedentary settlement	Late Mesolithic		p	p	p		
Fiskerhuset 92	islet settlement	Late Mesolithic		p	p			
Fjellstrup	peat bog, isolated find	Late Mesolithic	p					
Flatow	peat bog, unassociated find	Early Mesolithic	p					
Flynderhage	midden & settlement - single component	5580±95 - 5230±100 BP	p					p
Folkenhaus	riverside cave - settlement	c. 8140 BP	p	p				
Fohr	shoreline, unassociated find	Early Mesolithic	p					
Forslev	rock engraving	Mesolithic/Neolithic	p					
Forth Valley	stranding	Mesolithic			p			
Franchthi - Phase D	cave - settlement + burials - multiple component coastal plain, 1km from coast at occupation	Early-Late Mesolithic	p	p				p
Frebergsvik B	settlement - single component	c. 7950-7550 BP		p	p		p	
Frederiks Odde	midden	5400±100 BP		p				p
Friarton	isolated find	Early Mesolithic	p					
Friesack	seasonal settlement (spring) - single component	7750±100 - 9630±100 BP*	p	p		p	p	
Froser Seelandereien	unassociated find	Early Mesolithic	p					
Fucine Lake	settlement	Mesolithic		p				
Funen Island	unassociated finds	Early Mesolithic	p					
Gamborg Fjord		Late Mesolithic			p			
Gasen	settlement	Mesolithic/Neolithic	p					
Gislaue	settlement	Late Mesolithic			p			
Gislinge		Late Mesolithic	p					
Gniewino	peat bog, unassociated find	Early Mesolithic	p					
Godsted	settlement & midden - single component	c. 5150 BP	p	p	p			p
Gohra-Worle	lakeshore, unassociated find	Early Mesolithic	p					
Goldcliff	estuarine settlement - multiple occupation layers	6840±70 - 5415±75 BP*	p	p				
Gourris	cave - settlement	Early Mesolithic	p					
Gorlev	settlement	Early Mesolithic	p					
Goyet Cave	cave - settlement	Mesolithic	p					
Gr-Steegan	unassociated find	Early Mesolithic	p					
Gransmoor	isolated find	c. 11,500-11,100 BP	p					
Grena	unassociated find	Early Mesolithic	p					
Gressbakken	settlement	c. 4200-2400 BP*	p	p	p	p	p	
Grisby	settlement, Litorina beach ridge	Late Mesolithic		p				
Gronehelleren	cave - settlement - single component	c. 5450-4950 BP	p	p	p		p	
Gropbakkeengen	settlement	Late Mesolithic	p		p	p	p	
Grotta Erica	occupation & shell deposit	Late Glacial/Early Mesolithic*		p				p
Grotta la Porta di Positano	rockshelter - settlement & shell deposit	9810±275 - 8619±200 BP*		p				p
Grotte de Pegourie	cave - settlement	11,290±320 BP*	p					
Grotte des Harpons	cave - settlement	Early Mesolithic	p					
Grotte Massat	cave - settlement	Early Mesolithic	p					
Gudso Vig	cave - settlement	Late Mesolithic	p		p			
Gudumland	cave - settlement	Late Mesolithic			p			
Gusev	unassociated find	Mesolithic	p					
Haiti-Mylliplotto	settlement	c. 8500-7500 BP		p			p	
Halljarp	settlement - single component	c. 7450-6850 BP	p					
Hallebygaard	peat bog settlement	Late Meso-Early Neo	p	p		p	p	
Halsskov	islet settlement & submerged weirs	6830±105 - 5840±100 BP*	p					
Hamme	unassociated find	Early Mesolithic	p					
Hanger	unassociated find	Early Mesolithic	p					
Hardinxveld-Giessendam	river valley, grave	c. 5000 BP	p	p				
Hassing Osterkaer	peat bog, unassociated find	Early Mesolithic	p					
Hastefjorden	unassociated find	Early Mesolithic	p					
Haubolle	peat bog, unassociated find	Early Mesolithic	p					
Havelland	unassociated finds	Early - Late Mesolithic	p					
Havelse	midden	Late Mesolithic		p		p		p

Table 6.1b (contd)

Site	Site type	Date	Fishing Implements	Fish Remains	Sea Mammals	Aquatic Birds	Other Aquatic Resources	Shellfish
Havno	specialised extraction camp + midden 1km from mainland	Mesolithic/Neolithic mixed			p	p		p
Heden	settlement - single component	c. 4650 BP		p	p		p	
Helga Abri	rockshelter, settlement	c. 8230 BP		p			p	
Helgenæo	settlement	Late Mesolithic			p			
Henauhof Nord II	settlement	Late Mesolithic	p					
Henauhof Nordwest Stratum 6	riverside settlement	c. 9370-6480 BP	p	p				
Henauhof Nordwest Stratum 5	riverside discard site	c. 10,080-9500 BP	p	p		p		
Henauhof Nordwest Stratum 4	riverside discard site	c. 8290-8000 BP	p	p		p		
Henauhof Nordwest Stratum 3	riverside discard site	c. 6720 BP	p	p		p	p	
Henauhof Nordwest II	riverside settlement	c. 7260-6940 BP		p			p	
Henttala	settlement	c. 4950-6950 BP		p	p		p	
Herdangervidda - Hein 33	interior highland settlement - single component	4920±90 BP		p				
Herdangervidda - Langesjoen-1039	interior highland settlement - single component	6150±100 BP		p				
Herlufmagle	peat bog, unassociated find	Early Mesolithic	p					
Hesselbjerggaard	marsh settlement	Early Mesolithic	p				p	
Heusden	unassociated find	Early Mesolithic	p					
Hillierod	lakeshore unassociated find	Early Mesolithic	p					
Hinge So	lakeshore unassociated find	Early Mesolithic	p					
Hitzkirch-Seematt	lakeshore settlement	Late Mesolithic	p	p		p		
Hjembaek	unassociated find	Early Mesolithic	p					
Hoedic	mortuary midden - single component 2km from island coast at beginning of site occupation	6740±60 - 5680±50 BP	p	p	p			p
Hofderup	unassociated find	Early Mesolithic	p					
Hohen Viecheln	settlement - single component	c. 8750-7750 BP	p	p		p	p	
Hollandsvandet	isolated find	Late Mesolithic	p					
Holmegaard I	lakeshore refuse zone + settlement - single component	c. 8450-6000 BP*	p	p		p	p	
Holmegaard IV	lakeshore refuse zone + settlement - multiple component	c. 8350-7750BP	p					
Holmegaard V	lakeshore settlement	Early Mesolithic	p					
Honkajoki	settlement	Late Mesolithic		p	p		p	
Hook of Holland	unassociated find, dredged from sea bed inland at occupation?	Early Mesolithic	p					
Hopeapello	settlement	c. 9000-8500 BP			p			
Home	unassociated find	Early Mesolithic	p					
Hominge Mosse	peat bog, unassociated find	Early Mesolithic	p					
Homsea	peat bog, isolated find	Lateglacial	p					
Horsensfjord	unassociated find	Late Mesolithic	p					
Hoybukt	settlement	Late Mesolithic		p	p	p	p	
Huseby Klev	seasonal whaling station (summer/winter), transgressed site	9400±75 - 8375±100 BP*	p	p	p			
Husum	settlement	c. 10,500 BP	p					
Hylteberga mosse	peat bog, unassociated find	Early Mesolithic	p					
Icoana	riverside cave - settlement - multiple component	8070±130BP to 8010±120BP	p	p				p
Ingelstad	peat bog, unassociated find	Early Mesolithic	p					
Inzigkofen	rockshelter seasonal settlement (winter/early summer)	c. 8720-7770 BP	p	p		p	p	p
Isbergues	unassociated find	Early Mesolithic	p					
Istaby	peat bog, isolated find	Early Mesolithic	p					
Isturtz	cave - settlement - multiple component	Early Mesolithic	p					
Jaegerspris	settlement	Late Mesolithic			p			
Jagersshole	rockshelter settlement	c. 7880 BP	p	p		p	p	
Jara Bank	Ancylus Lake shore, isolated find	Early Mesolithic	p					
Jaravallen	unassociated find	Early Mesolithic	p					
Jonstorp		Late Mesolithic	p	p				
Jonstrup Vaenge		Early Mesolithic	p					
Jordlose Mose II	marsh, small site	Mesolithic	p					
Kallingemore mosse	unassociated find	Early Mesolithic	p					
Kalundborg		Late Mesolithic	p					
Kams		8050±75 BP	p					
Kara-Koba	riverside settlement	Late Mesolithic	p	p				
Karby	unassociated find	Early Mesolithic	p					
Kassemosse	midden	Mesolithic/Neolithic mixed	p	p				p
Kents Cavern	occupation layers	12,320±130 BP*	p					
Kervara	riverside settlement	Late Mesolithic		p	p		p	
Kildegaard	marsh settlement	Mesolithic/Neolithic mixed	p		p	p		
Kildegaard Ost	marsh, small site	Mesolithic	p					
KI Machnow	unassociated find	Early Mesolithic	p					
Klinteso	settlement	Mesolithic/Neolithic mixed		p		p		
Klubba	rock engraving	Mesolithic-Neolithic	p					
Koldingfjord	settlement-single component	c. 5150-5750 BP	p		p			
Kolind I	headland settlement	Mesolithic/Neolithic mixed	p		p			

Table 6.1b (contd)

Site	Site type	Date	Fishing Implements	Fish Remains	Sea Mammals	Aquatic Birds	Other Aquatic Resources	Shellfish
Kongemosen	lakeshore settlement - single component	7320±130 - 7350±120 BP	p					
Kongemosen V	peat bog, small site	Late Mesolithic	p					
Kongsted	unassociated find	Early Mesolithic	p					
Konnu	seal hunting station + burials, 2km from mainland	c. 5500-5000 BP	p	p	p	p		
Kopu I	island peninsula seal hunting station	c. 5698-5330 BP	p	p	p			
Kopu IV	island peninsula seal hunting station	c. 6640-6757 BP*		p	p			
Kopu VIII	island peninsula seal hunting station	6172±50 BP*		p	p			
Koster	unassociated finds	Early Mesolithic	p					
Kosuchen	unassociated finds	Early Mesolithic	p					
Kotedalen		c. 7600-7000 BP		p	p		p	
Kourtane	settlement	Late Mesolithic			p			
Krampkewitz	unassociated find	Early Mesolithic	p					
Kulm	unassociated find	Early Mesolithic	p					
Kunda	marsh settlement	8340±210 BP*	p	p	p			
Kusserow	unassociated find dredged from lake	Early Mesolithic	p					
Kvernevika	rock engraving	Mesolithic?	p					
La Haine	cave, settlement	Early Mesolithic	p					
La Paloma	cave, settlement	Early Mesolithic	p					
La Riera Asturian	cave, settlement, midden - single component	6500±200 BP*	p	p				p
La Riera Azilian	cave, settlement - multiple component	c. 8,600-14,760 BP*	p	p				p
La Tourasse	cave, settlement	Early Mesolithic	p					
La Vache	cave, settlement	Early Mesolithic	p					
Lachmirovica	hunting site	Late Glacial	p					
Lake Lubana	hunting site	Late Glacial	p					
Lammefjord	unassociated find	Late Glacial	p					
Langeland Island	unassociated	Early Mesolithic	p					
Lango	midden	Mesolithic/Neolithic mixed	p	p	p			p
Laspi VII	settlement	9th mill BP	p					
Lattmoor	unassociated find	Early Mesolithic	p					
Laugasen	seasonal extraction camp	Early Mesolithic		p	p	p		
Laugerie Basse	cave, settlement	Early Mesolithic	p					
Lauterack	rockshelter settlement	c. 6440 BP	p	p				
Le Trou Violet	riverside cave - settlement - multiple component	Early Mesolithic	p					
Leiknes	rock engraving	Mesolithic/Neolithic	p					
Leman/Ower	isolated find dredged from sea bed	11,740±150 BP*	p					
Lepenski Vir	settlement & burials - multiple component	6560±100 BP - 7360±100 BP*	p	p			p	p
Liesbergmuli 6	site	c. 8500-7500 BP	p					
Lille Knabstrup	site	Late Mesolithic	p					
Lille Loshult	peat bog, isolated find	c. 9000 BP	p					
Lillebaelt	isolated find	Mesolithic	p					
Limhamn	settlement, Litorina sea shore	Early Mesolithic	p		p			
Lindholm I	submerged settlement	5745±145 BP*	p					
Lippe	rivershore, unassociated find	Early Mesolithic	p					
Loddesborg	unassociated find	Late Mesolithic		p	p	p	p	
Lohusu	settlement	Early Mesolithic	p					
Lojesmolle	peat bog, small site	Early Mesolithic	p					
Longueruche	cave, settlement	Early Mesolithic	p					
Loona	sealing station	Mesolithic/Neolithic mixed		p	p			
Lorby	unassociated find	Early Mesolithic	p					
Lorthet	cave, settlement	Early Mesolithic	p					
Lough Boora	lakeshore settlement - single component	8410±70 - 8475±75 BP*		p		p		
Los Azules I	cave, settlement	9450±120 - 9430±120 BP*	p					
Lumenbra	cave, settlement	Early Mesolithic	p					
Lundfors	series of sites	Mesolithic	p		p			
Lundfors A	settlement - multiple component	c. 5350 BP		p	p			
Lundfors B	settlement - multiple component	c. 5350 BP		p	p		p	
Lundgard	settlement	5660±100 BP						p
Lystrup I		6110±100 BP	p					
Lystrup Enge	midden	Early Mesolithic	p	p				
MacArthurs Cave	midden, cave - multiple component	6700±80 BP*						p
Magdeburg	unassociated find, dredged from river	Early Mesolithic	p					
Magleo	lakeshore settlement	Late Meso-Early Neo	p				p	
Magoito	estuarine midden	9580±100 BP*						p
Maisieres	unassociated find	Early Mesolithic	p					
Malerfels	refuse area	c. 9560-8605 BP		p			p	
Marietorp	unassociated find	Mesolithic	p					
Marievka	cemetery	7955±55 - 7620±160 BP*	p	p				
Marzenin	unassociated find	Early Mesolithic	p					
Mas D'Azil	cave, settlement	Early Mesolithic	p					

Table 6.1b (contd)

Site	Site type	Date	Fishing Implements	Fish Remains	Sea Mammals	Aquatic Birds	Other Aquatic Resources	Shellfish
Mechelen	unassociated finds	Early Mesolithic	p					
Mecklenburg	unassociated finds	Early Mesolithic	p					
Meiendorf	settlement	Late Glacial	p					
Meiklewood	stranding	c. 4950-6450 BP			p			
Meilgaard	settlement, midden - multiple component	c. 5150-5450 BP	p		p	p		p
Melle	unassociated find	Early Mesolithic	p					
Mendrienen	unassociated find	Early Mesolithic	p					
Menturren	unassociated find	Early Mesolithic	p					
Mitteldorf	unassociated find	Early Mesolithic	p					
Mjalby mosse	peat bog, unassociated find	Early Mesolithic	p					
Moer	unassociated find	Late Mesolithic	p					
Moita do Sebastiao	midden - single component	7080±130 - 7350±350 BP*		p				p
Molara Cave	occupation & shell deposits	8600±100 BP*		p	p	p		p
Mollegabet I	inlet midden, offshore refuse zone & settlement	Late Mesolithic	p	p	p	p	p	p
Mollegabet II	inlet settlement & refuse	5130±75 BP	p	p	p	p	p	p
Monster	unassociated find, land reclamation	Early Mesolithic	p					
Montclus	riverside cave, settlement - multiple component	7020±140 - 6230±150 BP*		p				
Monte Leone	rockshelter settlement	8225±80 BP*		p				p
Montfort	cave, settlement	Early Mesolithic	p					
Morgi	unassociated finds	Early Mesolithic	p					
Morin	cave, settlement	Early Mesolithic	p					
Morke Enge	marsh settlement	c. 8250-7900 BP	p					
Morton A	promontary settlement	8050±255 - 6300±150 BP*						
Morton B	promontary midden - single component	6147±90 - 6382±120 BP*		p		p		p
Mount Sandel	sedentary settlement - multiple component	c. 9100-8500BP & 8100-7650 BP	p	p		p		
Muge	midden	Late Mesolithic		p				p
Muldbjerg	unassociated find	Early Mesolithic	p					
Mullerup	peninsula marsh settlement - single component	8330±110 - 8660±120 BP*	p			p		
Multorp	unassociated find	Early Mesolithic	p					
Murzak-Koba	riverside settlement	Late Mesolithic	p	p				
Musholm Bay	submerged settlement & refuse small sheltered bay at river mouth at occupation	8070±115 - 7320±70 BP*		p				
N f Lilleo	peat bog, small site	Mesolithic	p					
Naa Kamae	sealing station	Mesolithic/Neolithic mixed		p	p			
Naebbet	unassociated find	Late Mesolithic	p					
Narpes	isolated find, Litorina clay	Late Mesolithic	p		p			
Narva	settlement	c. 7700-5000 BP*	p	p	p	p	p	
Nasebyholm	site	Early-Late trans	p					
Nebbe Mosse	lakeshore unassociated find	Late Mesolithic	p					
Nederst	midden	Late Mesolithic	p	p				p
Nekselo	site	c. 5440-5560 BP*	p		p			
Neu Jucha	unassociated find	Early Mesolithic	p					
Neu Strelitz	lakeshore isolated find	Early Mesolithic	p					
Neught	unassociated find	Early Mesolithic	p					
Newferry	lakeshore settlement - multiple component	6215±100 - 7485±115 BP*	p	p				
Nidlose	peat bog site	Late Mesolithic	p					
Ninove	unassociated	Early Mesolithic	p					
Nitki	settlement	Early Mesolithic	p					
Nivaa	site	Late Mesolithic			p			
Nivagaard	midden, settlement - multiple component	c. 5150-4700 BP	p	p	p			p
Nizhnee Veret'e	riverside settlement	c. 8000-7500 BP*	p					
Nizhnee Veret'e I	riverside settlement	9050±80 - 8520±80 BP	p					
Noddekonge	lakeshore small site	Mesolithic	p					
Nolgarder	unassociated find	Early Mesolithic	p					
Nord de Bruxelles	peat bog, unassociated find	Early Mesolithic	p					
Norrkopping	isolated find, Litorina clay	Late Mesolithic	p		p			
Norslund	midden, settlement - multiple component	6420±130 - 5680±120 BP		p				p
Norsminde	estuarine midden & settlement - single component shallow bay near deep channel (9m)	5480±95 - 5080±90 BP	p	p	p	p	p	p
Novgorod	unassociated find	Mesolithic	p					
Nova	unassociated find	Early Mesolithic	p					
Noyen-sur-Seine	riverside settlement - multiple component	9130±100 - 5400±70 BP*	p	p				
Nyelv Nedre Ost - Lossoa's Hus	settlement & refuse	6840±100 - 5670±60BP*	p	p				
Nyelv Nedre Vest	settlement & refuse	c. 4980±180 - 4190±80 BP*	p	p	p	p		p
Obourg	unassociated find	Early Mesolithic	p					
Odense	rivershore, unassociated find	Early Mesolithic	p					
Odmot	cave settlement	c. 8900-8750 BP & 7850-6250 BP*	p	p				
Odsherred	site	Late Mesolithic	p					
Offerdals	isolated find	Early Mesolithic	p					

Table 6.1b (contd)

Site	Site type	Date	Fishing Implements	Fish Remains	Sea Mammals	Aquatic Birds	Other Aquatic Resources	Shellfish
Ogaarde	peat bog settlement	8300±150 BP	p	p	p	p	p	
Olby Lyng	settlement - single component	5210±130 - 5320±130 BP		p	p	p		
Oleni Ostrov	large cemetery site - no associated occupation	7750±110 - 7280±80 BP*	p				p	
Olimanas	settlement, 1km from mainland sea 40m at 1km, 70m at 6km	7985±220 - 7440±160 BP*		p	p	p	p	
Orebro	lakeshore unassociated find	Mesolithic	p					
Orelunds Mose	peat bog, small site	Early Mesolithic		p		p	p	
Ornskoldvik	unassociated find	Early Mesolithic	p					
Oslo	unassociated find	Early Mesolithic	p					
Ossowo	unassociated find	Early Mesolithic	p					
Osterkaer	offshore refuse zone	Late Mesolithic	p	p				
Ostroleka	riverside unassociated find	Early Mesolithic	p					
Ostruvul Banului	settlement	Late Mesolithic	p	p				
Ostrovul Mare	cave, settlement	Early Mesolithic	p					
Oulu	isolated find, Litorina clay	Final Mesolithic	p		p			
Oxie	peat bog isolated find	Early Mesolithic	p					
Padina I	cave, settlement	9331±58 - 7738±51 BP*	p	p			p	
Pandeiro	midden	7800±110 BP						p
Paris	unassociated find	Early Mesolithic	p					
Peitschendorf	unassociated find	Early Mesolithic	p					
Penken	unassociated find	Early Mesolithic	p					
Pentekinnen	unassociated find	Early Mesolithic	p					
Perkallen	unassociated find	Early Mesolithic	p					
Pemau	unassociated find dredged from river	Early Mesolithic	p		p			
Pesse	isolated find	c. 7500 BP*	p					
Pietracorbara	rockshelter - grave + refuse layers	7840±31 - 6920±300 BP*		p				p
Pihlsten	unassociated find dredged from river	c. 8000 BP	p					
Pobiel 10	riverside settlement	8450±50BP - 4820±45 BP	p	p		p	p	
Pocas de Sao Bento	midden, 2km from coast	c. 7200-6700 BP	p	p				p
Pommeroeul	unassociated find	Early Mesolithic	p					
Pont D'Ambon	riverside cave settlement	c. 10,350±190 - 9830±130 BP*	p	p				
Porsemose	isolated find	Early Mesolithic	p					
Porth-y-waen	isolated find	11,390±120 BP*	p					
Porvoo	settlement	Late Mesolithic		p	p		p	
Poulton-le-Flyde	hunting site	12,400±300 BP	p					
Præstelyngen	lakeshore settlement + offshore refuse zone single component	5150±100 BP	p	p				
Praseto	isolated find	Late Mesolithic	p					
Priestemoor	unassociated find	Early Mesolithic	p					
Priory Midden	midden	5870±50 - 5470±50 BP*		p	p		p	p
Pulli	rivershore seasonal (summer/autumn) settlement	9600±120 - 8300±75 BP*	p					
Rabelovsjoen	settlement	Early Mesolithic	p					
Rahkaissuo	settlement	c. 9000-8500 BP		p	p			
Raklev	unassociated find	Early Mesolithic	p					
Randers	unassociated finds	Early Mesolithic	p					
Rascano	cave, settlement	Early Mesolithic	p					
Reddies	unassociated find	Early Mesolithic	p					
Reilhac	cave, settlement	Early Mesolithic	p					
Rerslev	lakeshore unassociated find	Early Mesolithic	p					
Retschwil-Stafligen II	lakeshore settlement	Mesolithic/Neolithic	p					
Rheinbalm	site	c. 8500-7500 BP	p					
Rhodes II	cave, settlement	Early Mesolithic	p					
Ringkloster	lakeshore settlement + offshore refuse zone multiple component	5820±95 - 4800±65 BP*	p	p	p	p		p
Ringsjon	unassociated	Early Mesolithic	p					
Ringsted	rivershore unassociated find	Mesolithic	p					
Riparo Blanc	rockshelter settlement shell deposits - single component	c. 8565±80 BP*		p				p
Risga	cave settlement + midden - single component sealing station	c. 6000-5875 BP*	p		p			p
Rochedane	riverside settlement	Early Mesolithic		p				
Rochfort	cave, settlement	Early Mesolithic	p					
Rockmarshall	midden - single component	5470±110 BP		p	p	p		p
Rodoy	rock carving	Mesolithic/Neolithic	p					
Rogaland	unassociated find	Early Mesolithic	p					
Romagnano	lakeside cave settlement - single component	9490±80 - 7400±100 BP*		p			p	
Romeiras	midden & cemetery	Late Mesolithic						p
Romsey	riverside unassociated find	Early Mesolithic	p					
Ronaes Skov		Late Mesolithic			p			
Ronneholms mosse	peat bog unassociated find	8610±90 BP*	p					

Table 6.1b (contd)

Site	Site type	Date	Fishing Implements	Fish Remains	Sea Mammals	Aquatic Birds	Other Aquatic Resources	Shellfish
Rorvik	settlement	Late Mesolithic		p				
Rosenhof	unassociated find	Mesolithic	p					
Rottjamslid	midden - single component near deep water (25m)	c. 5600 BP*	p	p	p	p		p
Rotterdam-Bergschenhoek	peat bog isolated find	5415±60 BP	p	p				
Royston	no exact location	Early Mesolithic	p					
Rude II	lakeshore settlement	Mesolithic/Neolithic mixed	p					
Rugen	settlement	Late Mesolithic	p					
Ruthenie	unassociated find	Early Mesolithic	p					
S Kotopello	settlement	c. 9000-8500 BP			p			
Saarijärvi	settlement	Late Mesolithic		p		p	p	
Salles du Salat	cave, settlement	Early Mesolithic	p					
Salitre	cave, settlement	Early Mesolithic	p					
Samouqueira	midden	5190±130 BP		p				p
Sanda	sealing station	Mesolithic			p			
Sandhuse Mose	marsh, small site	Mesolithic	p					
Sandlyng Skov	marsh, small site	Early Mesolithic	p					
Sao Juliao	estuarine midden	c. 8800-7500 BP						p
Saroki	series of sites	Mesolithic		p				
Satrup	peat bog, unassociated finds	Mesolithic	p					
Saunapello-Perunamaa	settlement	c. 7500-6000 BP			p		p	
Schela Caldovei	river terrace settlement	8290±105BP - 8570±105 BP*	p	p				p
Schlussbeker Moor	isolated find	Late Mesolithic*	p					
Schotz	lakeshore settlement - single component	c. 6950-7750 BP	p					
Schoonaerde	unassociated find	Early Mesolithic	p					
Seamer Carr	settlement	8210±150 BP	p					
Segebro	settlement	6970±90 - 7390±80 BP	p	p	p	p	p	
Sejro	settlement	Late Mesolithic			p			
Shewalton	isolated find	5840±80 BP*	p					
Shirgirskiy	marsh settlement	7th-5th mill BP	p					
Siedlung Forschner	lakeshore settlement	Early Mesolithic	p	p				
Siggard	midden	5950±150-5430±100 BP						p
Siggeneben Sud	settlement	Late Mesolithic	p					
Siivesti	settlement	c. 7000-6000 BP	p					
Silkeborg So	unassociated	Mesolithic	p					
Siltapellonhaka	settlement	c. 7500-6000 BP		p	p		p	
Siltapellonhaka II	settlement	c. 6000BP		p	p	p	p	
Siretorp	site, deposits on freshwater clay	Early-Late trans	p		p			
Sjalko	unassociated find	Mesolithic	p					
Sjodiken	site	Early-Late trans	p					
Sjoholmen	marsh settlement	Late Meso - Early Neo	p	p				
Skafteløv	terrestrial hunting	Late Glacial	p					
Skalstrup	unassociated find	Mesolithic	p					
Skane	unassociated find	Mesolithic	p					
Skateholm I	settlement & cemetery - single component	5790±70 - 6020±70 BP	p	p	p	p	p	
Skateholm II	settlement & cemetery - single component	6380±70 - 6910±70 BP	p	p	p	p	p	
Skellingsted Bro	riverside settlement	Mesolithic	p					
Skellingsted Mose Nord	marsh, small site	Mesolithic	p					
Skipsea	lakeshore isolated find	Lateglacial	p					
Skipshelleren - 6	rockshelter seasonal (summer) settlement single component	6000±100-6230±140 BP	p	p	p		p	p
Skjoldnaes	unassociated find	Mesolithic	p					
Skottemarke	peat bog settlement - multiple component	c. 9150-8650 BP	p					
Skurups	peat bog unassociated find	Early Mesolithic	p					
Slagelseegnen	unassociated find	Early Mesolithic	p					
Smaland Bight	submerged settlement	c. 6800 BP		p				
Soborg Lake	offshore fishing structure	Late Mesolithic	p					
Soborg So	settlement	c. 8750-8150 BP	p					
Soholm	unassociated find	Early Mesolithic	p					
Solager	settlement, midden - single component specialised extraction camp	5520±110 BP	p	p		p		p
Sonderholm	peat bog settlement	c. 4470 BP	p					
Sonderod	peat bog, small site	Mesolithic	p					
Sorbehen	unassociated find	Early Mesolithic	p					
Spiginas	cemetery site	7470±60 BP*						
Spitalhöhle	cave site hut/windbreak depression	Late Mesolithic		p				
Spjalko	settlement	c. 5850±75 - 5700±75 BP		p				
Sproughton I	isolated find	10,910±150 BP*	p					
Sproughton II	isolated find	10,700±160 BP*	p					

Table 6.1b (contd)

Site	Site type	Date	Fishing Implements	Fish Remains	Sea Mammals	Aquatic Birds	Other Aquatic Resources	Shellfish
Stammebad		Late Mesolithic	p					
Star Carr	lakeshore settlement - single component	Early Mesolithic*	p			p		
Stellmoor	terrestrial hunting camp	c. 9860-7830 BP*	p					
Stensballe Sund	settlement	Late Mesolithic	p					
Stirling-Cow-Park	stranding	c. 6450-5150 BP			p			
Stokkeborg		Mesolithic	p					
Stora Bjers	grave - male	Maglemose (location)	p					
Stora Dode mosse	peat bog unassociated find	Early Mesolithic	p					
Stora Forvar-Stora Kariso	sealing station	Final Mesolithic	p		p			
Store Vildmose	unassociated find	Early Mesolithic	p					
Strand	site	Late Mesolithic	p					
Strandegaard	settlement	Mesolithic/Neolithic mixed	p		p			
Stryno Basin	submerged settlement & refuse	c. 5950 BP	p					
Sutton	site	mid 6th mill BP		p	p			p
Svaerdborg I	lakeside settlement - multiple component	c. 8350-7850 BP	p	p	p	p	p	
Svaerdborg II	lakeside seasonal (summer) settlement	c. 8450-8150 BP	p	p		p		
Svedstrup	unassociated find	Early Mesolithic	p					
SvinningeVeijle	adjacent Ertebolle settlement	c. 6120 BP	p	p				
Szurguponen	unassociated find	Early Mesolithic	p					
T Ruoksmäa	settlement	c. 9000-8500 BP		p	p		p	
Taaderup	peat bog, kill site	c. 8750-7950 BP	p					
Tallikaaro	settlement	c. 7500-6000 BP		p	p	p	p	
Tange	riverside isolated find	Early Mesolithic	p					
Tannstock	lakeshore settlement	Early Mesolithic	p					
Tarvasto	settlement	Early Mesolithic	p					
Tashkovo IV	seasonal hunting camp	Mesolithic		p				
Tatsum So	adjacent Ertebolle settlement	Late Mesolithic		p				
Teviec	mortuary midden 1km from coast at beginning of site occupation	7165±60 - 5080±55 BP	p	p	p	p		
Thatcham	lakeshore settlement - multiple component	9760±120 - 5100±350 BP*	p	p		p	p	
Tingbjerggaard	lakeshore settlement	Late Mesolithic	p	p			p	
Tisso	unassociated find, dredged from lake	Early Mesolithic	p					
Tjikkitrask	settlement	6395±90 - 7005±100 BP		p	p		p	
Tjorn	unassociated find	Early Mesolithic	p					
Tlokowo	lakeshore unassociated find	Early Mesolithic	p					
Toppinen	settlement	c. 9000-8500 BP		p	p		p	
Torkop	settlement	Early Mesolithic		p			p	
Torning	peat bog unassociated find	Early Mesolithic	p					
Torup	unassociated find	Early Mesolithic	p					
Torvala	site	c. 7000-6000 BP	p					
Travenort	unassociated find	Early Mesolithic	p					
Trorod	unassociated find	Early Mesolithic	p					
Tuboek Molle	unassociated find	Late Mesolithic	p					
Tybrind Vig	submerged settlement, refuse & ?cemetery single component	c. 5950-5650 BP*	p	p	p	p		p
Uikestrup	site	c. 7350 BP	p	p				
Uikestrup I	settlement - multiple component	8370±130 - 8030±140 BP	p					
Uikestrup II	settlement - multiple component	8370±130 - 8030±140 BP	p					
Uikestrup IV	settlement	Mesolithic	p					
Uislev		Mesolithic	p					
Umbusi	settlement	Late Mesolithic		p				
Undlose Bro	lakeshore settlement	Early Mesolithic	p					
Undsted	peat bog unassociated find	Early Mesolithic	p					
Urtaaga	cave, settlement	Early Mesolithic	p					
Uzzo Cave	cave, midden - multiple component	c. 10,070-6720 BP*		p	p	p	p	p
Vaalse Vig	settlement	Mesolithic	p					
Vaby	unassociated find	Early Mesolithic	p					
Vadsted	unassociated find	Early Mesolithic	p					
Vaenge So	specialised extraction camp	Late Mesolithic	p		p			
Valle, Norway	rock carvings	Mesolithic/Neolithic	p					
Valle, Spain	occupation layers	Early Mesolithic	p					
Vandlose	marsh settlement	7600±140 BP	p					
Varanger	series of settlements	Late Mesolithic						
Vasterbjers	settlement, cemetery	Final Mesolithic	p		p			
Vedbaek Boldbaner	shoreline settlement - multiple component	6510±110 - 4990±105 BP		p	p			
Vedbaek Henniksholm Bogebakken	settlement, midden & offshore refuse - single component	5910±120 - 6170±120 BP*	p	p	p	p	p	p
Vedbaek Magleholm	settlement & offshore refuse zone	Late Mesolithic		p				
Vedbaek Maglemosegard	settlement, midden & offshore refuse - single component	c. 5750-6250 BP	p	p				p

Table 6.1b (contd)

Site	Site type	Date	Fishing Implements	Fish Remains	Sea Mammals	Aquatic Birds	Other Aquatic Resources	Shellfish
Vedbaek Maglemosegårds Vaenge	shoreline settlement	3760±75BC-4610±105BC	p	p				
Vedbaek Stationsvej19	settlement & refuse	Late Mesolithic		p				
Vedbaek Vaenget Nord	specialised extraction camp: summer	c. 6120-5900 BP	p	p				
Vejby	unassociated find	Early Mesolithic	p					
Vejle Lake	peat bog unassociated find	Early Mesolithic	p					
Vejlbro	settlement	Late Mesolithic	p					
Vejleby	unassociated find	Late Mesolithic						
Vente	site	Late Mesolithic	p					
Verup Mose	peat bog, small site	Mesolithic/Neolithic mixed	p	p		p		
Vester Ulslev		Mesolithic	p					
Vibygaard	unassociated find	Early Mesolithic	p					
Vidigal	promontory midden	c. 6640-6030 BP*		p				p
Viken Lake	unassociated find	Early Mesolithic	p					
Villespy	settlement	Early Mesolithic	p					
Villingebaek	settlement & offshore refuse - single component	7030±130 - 7280±120 BP	p	p				
Vinde-Helsing Mose	marsh settlement	Early Mesolithic	p	p		p	p	
Vinkel Mosse	isolated find	Early Mesolithic	p					
Virksund	settlement	Late Mesolithic			p			
Vis I	peat bog, refuse area	c. 8080-7090 BP*	p					
Viste	rockshelter midden	7420±150 BP*	p	p	p			p
Vlasac	river terrace settlement	c. 10250-8000 BP*	p	p			p	p
Vollersgard	settlement	5230±95 BP						p
Wachtfelsen	site	Late Mesolithic	p					
Waltham	isolated find	9790±100 BP*	p					
Wandsworth	isolated find, dredged from river	9050±85 BP*	p					
Waren	peat bog, unassociated find	Early Mesolithic	p					
Wendhausen	unassociated find	Early Mesolithic	p					
West Carse	stranding	c. 6450-5550 BP			p			
Wetzikon-Robenhausen	lakeshore settlement	Mesolithic	p	p		p		
Wicheien	rivershore unassociated find	Early Mesolithic	p					
Willebroek	unassociated finds	Early Mesolithic	p					
Wilsleben	unassociated find	Early Mesolithic	p					
Wisla	unassociated find	Early Mesolithic	p					
Yderhede	offshore refuse zone	Late Mesolithic		p				
Ystad	unassociated find	Mesolithic	p					
Zalavonga	rock carvings	Mesolithic/Neolithic	p					
Zalavruga	rock carvings	Late Mesolithic	p					
Zalesie	unassociated	Early Mesolithic	p					
Zamostje II	riverside settlement	c. 7900-7300 BP	p					
Zeie	unassociated find	Early Mesolithic	p					
Zigeunerhohle	site	c. 8500-7500 BP	p					
Zutphen-Ooijerhock	riverside settlement	Late Meso - Late Neo*	p	p			p	
Zvejnieki	lakeshore cemetery	Late Meso - Late Neo*	p					
Zvidze	lakeshore settlement	Early Mesolithic - Mid Neolithic^*	p	p		p		

ONLY WHERE ASSEMBLAGE IS MIXED ARE POTENTIALLY NON-MESO FINDS INCLUDED IN THE DATABASE
(BUT EXCLUDED FROM TEMPORAL/SPATIAL/CORRELATION ANALYSES)

p - present

* - Site location in relation to shoreline is uncertain owing either to lack of detail in publication or to chronological uncertainties

^ - Finds dated by palynological analysis of associated sediments

* - see Appendix XX for series of radiocarbon dates

Table 6.2 - Database of Fish Remains Identified at Mesolithic Sites (NISP)

Table 6.2a Database of fish remains

Site	Fish unidentified	Teleost	Marine Fish	Freshwater Fish	Fish teeth	Acanthocottus scorpius	Allis Shad	Asp	Atlantic Horse Mackerel	Ballan Wrasse	Barbel	Bass	Beluga	Black Goby	Black Sea Roach	Black Seabream	Blenny
Abri du Pape	2																
Advik -N W Midden House F																	
Advik -N E Midden House F	163																
Advik -N W Midden House B																	
Advik-House F test pit																	
Advik- N E Midden House J	10																
ADVIK TOTAL	173																
Aero																	
Agerod Complex																	
Akonge*																	
Almeo																	
Angsnes	53																
Annerod																	
Araguina-Sennola	480																
Arapouco																	
Argus																	
Arlov I																	
Askola	1																
Baile Herculane								U									
Balltorp																	
Balma Margineda																	
Birsmatten				59													
Bjornsholm*									P			P				P	
Bloksberg																	
Bredasten																	
Bua Vastergard																	
Cabeco da Amoreira	223						21										
Cabeco da Arruda	87						14										
Calbe	U																
Calowanie	U																
Carstenminde																	
Casteal nan Gillean																	
Cingle Vermell				U													
Cnoc Coig																	
Cnoc Sligeach																	U
Couze																	
Crouzade				U													
Cueva der Nerja	U																
Cuina Turcului I																	
Cuina Turcului II																	
Culoz				U													
Cushenden																	
Cyclops Cave																	
Dalkey Island II																	
Dalkey Island V																	
Dammen																	
Dietfurt Cave	1254			407													

Table 6.2a (contd)

Site	Fish unidentified	Teleost	Marine Fish	Freshwater Fish	Fish teeth	Acanthocottus scorpius	Allis Shad	Asp	Atlantic Horse Mackerel	Ballan Wrasse	Barbel	Bass	Beluga	Black Goby	Black Sea Roach	Black Seabream	Blenny
Drosselholm																	
Dudka I																	
Dudka II																	
Ertebolle*																	
Esperods mosse																	
Faaravejle																	
Falkensteinhöhle																	
Felsstalle				10%													
Fiskerhuset 6	1																
Folenhaus				U													
Franchthi Cave																	
Frebergsvik	3																
Friesack																	
Goldcliff																	
Gressbakken-House 3 NW Midden	2015																
Gressbakken-House 3 NE Midden	2532					2											
Gressbakken-House 4 NW Midden	170					2											
Gressbakken-House 4 NE Midden	211																
GRESSBAKKEN - TOTAL	4928					4											
Grisby*																	
Gronehelleren	263																
Gropbakkeengen - House 4	9																
Haiti-Myllypelto		1															
Hallebygaard																	
Havelse																	
Heden																	
Helga Abri				U													
Henauhof Northwest Stratum 6				1													
Henauhof Northwest Stratum 5				12													
Henauhof Northwest Stratum 4				39													
Henauhof Northwest Stratum 3				95													
Henauhof Northwest II				20													
Henttala		1															
Herdangervidda - Hein 33																	
Herdangervidda - Langesjoen																	
Hitzkirch-Seematt																	
Hoedic	U																
Hohen Viecheln																	
Holmegaard I																	
Honkajoki																	
Hoybukt Sydost House 2	2																
Inzigkofen	44														2		
Jagershöhle																	
Kara-Koba	F																
Kassemosse																	
Kervara																	
Klinteso																	
Konnu																	
Kopu I	8																
Kopu IV & VIII				U													
Kotedalen																	
Kunda	108																
La Riera Asturian	62		1														

Table 6.2a (contd)

Site	Fish unidentified	Teleost	Marine Fish	Freshwater Fish	Fish teeth	Acanthocottus scorpius	Allis Shad	Atlantic Horse Mackerel	Ballan Wrasse	Barbel	Bass	Beluga	Black Goby	Black Sea Roach	Black Seabream	Blenny
La Riera Azilian			52													
Lango																
Lautereck				85%												
Lepenski Vir I	154															
Lepenski Vir II	47															
Loddesborg																
Loona																
Lough Boora	1500															
Lundfors A																
Lundfors B																
Lystrup Enge*																
Malerfels				U												
Mollegabet I																
Mollegabet II																
Monte Leone																
Morton B																
Mount Sandel											144					
Murzak-Koba	F															
Naa Kamae																
Narva																
Nederst*																
Newferry	113															
Nivagard																
Norslund																
Norsminde*																
Noyen-sur-Seine																
Nyelv Nedre Vest - F11 Area 11	2															
Nyelv Nedre Vest - F8 Area 11																
Nyelv Nedre Vest - F9 Area 11																
Nyelv Nedre Vest - F10 Area 11																
Nyelv Nedre Vest - F11a Area 11																
Nyelv Nedre Vest - F13 Area 11																
Nyelv Nedre Vest - Lossa'a Hus	1															
Nyelv Nedre Vest - Area 4																
Nyelv Nedre Vest - House 1	45															
Nyelv Nedre Vest - House 3	312															
NYELV NEDRE VEST - TOTAL	360															
Ogaarde																
Olby Lyng	4 species															
Olmanas																
Orelunds Mose																
Oronsay Sites	12 species								U							
Ostenkaer*																
Ostrovul Banului												U				
Padina I	63															
Pietracorba	U				3											
Pobiel 10	U															
Pocas de Sao Bento																
Pont D'Ambon	3000															
Porvoo	1														U	
Praestelyngen	1000															
Priory Midden																
Pulli																

Table 6.2a (contd)

Site	Fish unidentified	Teleost	Marine Fish	Freshwater Fish	Fish teeth	Acanthocottus scorpius	Allis Shad	Asp	Atlantic Horse Mackerel	Ballan Wrasse	Barbel	Bass	Beluga	Black Goby	Black Sea Roach	Black Seabream	Blenny
Rahkaissuo																	
Ringkloster*																	
Rochedane				U													
Rockmarshall																	
Rorvik																	
Rottjarnslid										2							
Rotterdam-Bergschenhoek																	
Saaijarvi																	
Saroki																	
Schela Cladovei	981										6						
Segebro																	
Siedlung Forschner				U													
Siltapellonhaka		4															
Siltapellonhaka II		12															
Skateholm I																	
Skateholm II																	
Skipshelleren			U	U													
Solager																	
Spitalhohle				U													
Spjalko																	
Sutton			U														
Svaerdborg I																	
Svaerdborg II																	
Svinninge Veijle																	
T Ruoksmäa		9															
Tallikaaro		5															
Tashkovo IV																	
Tatsum So																	
Teviec																	
Thatcham	1																
Tingbjergaard																	
Tjikkitrask																	
Toppinen																	
Torkop																	
Tybrind Vig						U								U			
Umbusi																	
Uzzo Cave																	
Vedbaek Boldbaner																	
Vedbaek Henriksholm Bogebakken*														P			
Vedbaek Magleholm*																	
Vedbaek Maglemosegard*																	
Vedbaek Maglemosegards Vaenge*																	
Vedbaek Stationsvej19*																	
Vedbaek Vaenget Nord*																	
Vejleby																	
Verup Mose																	
Vidigal																	
Villingebaek																	
Vinde Helsing-Mose																	
Viste	U																
Vlasac	8372																
Yderhede*												P					
Zutphen-Ooijerhock																	
Zvidze													P				

Table 6.2a (contd)

Site	Bluefin Tuna	Bogue	Bonito	Brill	Greater Pipefish	Bullrout	Carp	Catfish	Chub	Spanish Mackerel	Cod	Common Bream	Common Seabream	Atlantic Sturgeon	Conger eel	Couch's Seabream	Crucian carp	Cuckoo Wrasse
Abri du Pape																		
Advik -N W Midden House F											81							
Advik -N E Midden House F											458							
Advik -N W Midden House B											18							
Advik-House F test pit											4							
Advik- N E Midden House J											15							
ADVIK TOTAL											576							
Aero											U							
Agerod Complex												23						
Akonge*								P										1%
Almeo																		
Angsnes											117							
Annerod											U							
Araguina-Sennola																		
Arapouco																		
Argus												U						
Arlov I											1							
Askola																		
Baile Herculane							U											
Balltorp											U							
Balma Margineda																		
Birsmatten																		
Bjornsholm*						P					2%							
Bloksberg											U							
Bredasten																		
Bua Vastergard											209							
Cabeco da Amoreira														2				
Cabeco da Arruda														2				
Calbe																		
Calowanie																		
Carstenminde											U							
Casteal nan Gillean																		
Cingle Vermell												U						
Cnoc Coig																		
Cnoc Sligeach																		
Couze																		
Crouzade																		
Cueva der Nerja																		
Cuina Turcului I							2					133						
Cuina Turcului II								3	4			43						
Culoz																		
Cushenden											U							
Cyclops Cave																		
Dalkey Island II																		
Dalkey Island V											U?				U			
Dammen											U							
Dietfurt Cave																		

Table 6.2a (contd)

Site	Bluefin Tuna	Bogue	Bonito	Brill	Greater Pipefish	Bullrout	Carp	Catfish	Chub	Spanish Mackerel	Cod	Common Bream	Common Seabream	Atlantic Sturgeon	Conger eel	Couch's Seabream	Crucian carp	Cuckoo Wrasse
Drosselholm																		
Dudka I								3				10						
Dudka II								16				14					3	
Ertebolle*						P					P							
Esperods mosse																		
Faaravejle											U							
Falkensteinhöhle									3									
Felsstalle																		
Fiskerhuset 6																		
Folenhaus																		
Franchthi Cave	U																	
Frebergsvik																		
Friesack								U										
Goldcliff																		
Gressbakken-House 3 NW Midden											5224							
Gressbakken-House 3 NE Midden											6290							
Gressbakken-House 4 NW Midden											497							
Gressbakken-House 4 NE Midden											778							
GRESSBAKKEN - TOTAL											12789							
Grisby*											18%							
Gronehelleren											U							
Gropbakkeengen - House 4											158							
Haiti-Myllypelto																		
Hallebygaard																		
Havelse											U							
Heden																		
Helga Abri																		
Henauhof Nordwest Stratum 6																		
Henauhof Nordwest Stratum 5																		
Henauhof Nordwest Stratum 4								2										
Henauhof Nordwest Stratum 3								14				1						
Henauhof Nordwest II																		
Henttala																		
Herdangervidda - Hein 33																		
Herdangervidda - Langesjoen																		
Hitzkirch-Seematt																		
Hoedic																		
Hohen Viecheln												1						
Holmegaard I																		
Honkajoki												1						
Hoybukt Sydost House 2											51							
Inzigkofen									9									
Jagersshohle																		
Kara-Koba																		
Kassemosse											U							
Kervara																		
Klinteso											U							
Konnu																		
Kopu I											4							
Kopu IV & VIII																		
Kotedalen																		
Kunda																		
La Riera Asturian																		

Table 6.2a (contd)

Site	Bluefin Tuna	Bogue	Bonito	Brill	Greater Pipefish	Bullrout	Carp	Catfish	Chub	Spanish Mackerel	Cod	Common Bream	Common Seabream	Atlantic Sturgeon	Conger eel	Couch's Seabream	Crucian carp	Cuckoo Wrasse
La Riera Azilian																		
Lango																		
Lautereck																		
Lepenski Vir I							86	3										
Lepenski Vir II								5										
Loddesborg											1788							
Loona											5268							
Lough Boora																		
Lundfors A												1						
Lundfors B																		
Lystrup Enge*						P					2%							
Malerfels																		
Mollegabet I											U							
Mollegabet II											95%							
Monte Leone		29	3							1						1		
Morton B											88			1				
Mount Sandel																		
Murzak-Koba																		
Naa Kamae											11			15				
Narva								100										
Nederst*											3%							
Newferry																		
Nivagard											U							
Norslund																		
Norsminde*						P					4%							
Noyen-sur-Seine																		
Nyelv Nedre Vest - F11 Area 11											2582							
Nyelv Nedre Vest - F8 Area 11											27							
Nyelv Nedre Vest - F9 Area 11											216							
Nyelv Nedre Vest - F10 Area 11											533							
Nyelv Nedre Vest - F11a Area 11											282							
Nyelv Nedre Vest - F13 Area 11											311							
Nyelv Nedre Vest - Lossoa'a Hus											52							
Nyelv Nedre Vest - Area 4											180							
Nyelv Nedre Vest - House 1											91							
Nyelv Nedre Vest - House 3											643							
NYELV NEDRE VEST - TOTAL											4917							
Ogaarde								32										
Olby Lyng											95.70%							
Olmanas											13							
Orelunds Mose								1										
Oronsay Sites													U		U			
Ostenkaer*																		
Ostrovul Banului							U	U	U			U						
Padina I							U	201										
Pietracorba																		
Pobiel 10																		
Pocas de Sao Bento																		
Pont D'Ambon																		
Porvoo																		
Praestelyngen								U				U					U	
Priory Midden																		
Pulli												5						

Table 6.2a (contd)

Site	Bluefin Tuna	Bogue	Bonito	Brill	Greater Pipefish	Bullrout	Carp	Catfish	Chub	Spanish Mackerel	Cod	Common Bream	Common Seabream	Atlantic Sturgeon	Conger eel	Couch's Seabream	Crucian carp	Cuckoo Wrasse
Rahkaissuo											1%	P						
Ringkloster*																		
Rochedane																		
Rockmarshall																		
Rorvik											U							
Rottjarnslid											106			1				
Rotterdam-Bergschenhoek								U										
Saaijarvi												7						
Saroki							U											
Schela Cladovei							239	19				25						
Segebro											184			8				
Siedlung Forscher																		
Siltapellonhaka																		
Siltapellonhaka II																		
Skateholm I											11	86+U						
Skateholm II								1			4	P						
Skipshelleren											U							
Solager											U							
Spitalhohle																		
Spjalko												P						
Sutton																		
Svaerdborg I												1						
Svaerdborg II																		
Svinninge Veijle																		
T Ruoksmäa																		
Tallikaaro																		
Tashkovo IV																		
Tatsum So																		
Teviec																		
Thatcham																		
Tingbjerggaard								3										
Tjikkitrask												2						
Toppinen																		
Torkop																		
Tybrind Vig				U	U	U					U							U
Umbusi												7						
Uzzo Cave																		
Vedbaek Boldbaner											U							
Vedbaek Henriksholm Bogebakken*						P					1%	P						
Vedbaek Magleholm*											1%	P						
Vedbaek Maglemosegard*						P					4%							
Vedbaek Maglemosegards Vaenge*						P					2%	P						
Vedbaek Stationsvej19*						P					11%	P						
Vedbaek Vaenget Nord*											2%							
Vejleby																		
Verup Mose																	1	
Vidigal										U								
Villingebaek											U							
Vinde Helsing-Mose																		
Viste											U							
Vlasac							1552	2283										
Yderhede*						1%					P							
Zutphen-Ooijerhock																		
Zvidze								5									1	

Table 6.2a (contd)

Site	Cyprinidae	Dab	Dentex	Dragonet	Drum	Eagle Ray	Eel	Epinephelus gigas	Fifteen Spined Stickleback	Flatfish	Flounder	Four-Horned Sculpin	Gadidae	Garfish	Gillhead	Gobids	Golden Redfish
Abri du Pape																	
Advik -N W Midden House F																	
Advik -N E Midden House F																	
Advik -N W Midden House B																	
Advik-House F test pit																	
Advik- N E Midden House J																	
ADVIK TOTAL																	
Aero																	
Agerod Complex							189										
Akonge*	44%						P										
Almeo																	
Angsnes																	
Annerod											U						
Araguina-Sennola																	
Arapouco															U		
Argus																	
Arlov I											P						
Askola																	
Baile Herculane																	
Balltorp																	
Balma Margineda																	
Birsmatten																	
Bjornsholm*	13%						56%			P	P		8%	P		P	
Bloksberg																	
Bredasten																	
Bua Vastergard																	
Cabeco da Amoreira	21					540	1								4		
Cabeco da Arruda	4					50									4		
Calbe																	
Calowanie																	
Carstenminde																	
Casteal nan Gillean																	
Cingle Vermell																	
Cnoc Coig																	
Cnoc Sligeach																	
Couze							U										
Crouzade																	
Cueva der Nerja																	
Cuina Turcului I																	
Cuina Turcului II	7																
Culoz																	
Cushenden																	
Cyclops Cave															U		
Dalkey Island II																	
Dalkey Island V																	
Dammen							U			U							
Dietfurt Cave																	

Table 6.2a (contd)

Site	Cyprinidae	Dab	Dentex	Dragonet	Drum	Eagle Ray	Eel	Epinephelus gigas	Fifteen Spined Stickleback	Flatfish	Flounder	Four-Horned Sculpin	Gadidae	Garfish	Gilthead	Gobids	Golden Redfish
Drosselholm																	
Dudka I	21																
Dudka II	36																
Ertebolle*	64%						17%		P		1%		7%	1%		P	
Esperods mosse																	
Faaravejle																	
Falkensteinhöhle	199																
Felsstalle																	
Fiskerhuset 6																	
Folenhaus																	
Franchthi Cave																	
Frebergsvik																	
Friesack																	
Goldcliff							457			8						239	
Gressbakken-House 3 NW Midden																	
Gressbakken-House 3 NE Midden																	
Gressbakken-House 4 NW Midden																	
Gressbakken-House 4 NE Midden																	
GRESSBAKKEN - TOTAL																	
Grisby*							P						69%				
Gronehelleren																	
Gropbakkeengen - House 4																	
Haiti-Myllypelto																	
Hallebygaard																	
Havelse																	
Heden																	
Helga Abri																	
Henauhof Northwest Stratum 6																	
Henauhof Northwest Stratum 5																	
Henauhof Northwest Stratum 4																	
Henauhof Northwest Stratum 3																	
Henauhof Northwest II																	150
Henttala																	
Herdangervidda - Hein 33																	
Herdangervidda - Langesjoen																	
Hitzkirch-Seematt																	
Hoedic																	
Hohen Viecheln																	
Holmegaard I																	
Honkajoki	5																
Hoybukt Sydost House 2																	
Inzigkofen	16																
Jagershöhle	13																
Kara-Koba																	
Kassemosse																	
Kervara	1																
Klinteso																	
Konnu																	
Kopu I																	
Kopu IV & VIII																	
Kotedalen																	U
Kunda																	
La Riera Asturian																	

Table 6.2a (contd)

Site	Cyprinidae	Dab	Dentex	Dragonet	Drum	Eagle Ray	Eel	Epinephelus gigas	Fifteen Spined Stickleback	Flatfish	Flounder	Four-Horned Sculpin	Gadidae	Garfish	Gillthead	Gobids	Golden Redfish
La Riera Azilian																	
Lango																	
Lautereck																	
Lepenski Vir I																	
Lepenski Vir II	1																
Loddesborg							118										
Loona							3				3	10					
Lough Boora							1608										
Lundfors A																	
Lundfors B																	
Lystrup Enge*	P						1%				P		73%	P			
Malerfels																	
Mollegabet I							U			U							
Mollegabet II							1			U							
Monte Leone							U										
Morton B													3				
Mount Sandel							124										
Murzak-Koba																	
Naa Kamae																	
Narva																	
Nederst*							38%				P		20%				
Newferry																	
Nivagard																	
Norslund							U										
Norsminde*				P			8%			2%	5%		25%			P	
Noyen-sur-Seine							P										
Nyelv Nedre Vest - F11 Area 11																	
Nyelv Nedre Vest - F8 Area 11																	
Nyelv Nedre Vest - F9 Area 11																	
Nyelv Nedre Vest - F10 Area 11																	
Nyelv Nedre Vest - F11a Area 11																	
Nyelv Nedre Vest - F13 Area 11																	
Nyelv Nedre Vest - Lossoa'a Hus																	
Nyelv Nedre Vest - Area 4																	
Nyelv Nedre Vest - House 1																	
Nyelv Nedre Vest - House 3																	
NYELV NEDRE VEST - TOTAL																	
Ogaarde																	
Olby Lyng											4.00%						
Olmanas							1										
Orelunds Mose																	
Oronsay Sites																	
Ostenkaer*							18%			9%							
Ostrovul Banului																	
Padina I	80																
Pietracorba																	
Pobiel 10																	
Pocas de Sao Bento																	
Pont D'Ambon							U										
Porvoo																	
Praestelyngen																	
Priory Midden																	
Pulli																	

Table 6.2a (contd)

Site	Cyprinidae	Dab	Dentex	Dragonet	Drum	Eagle Ray	Eel	Epinephelus gigas	Fifteen Spined Stickleback	Flatfish	Flounder	Four-Horned Sculpin	Gadidae	Garfish	Gillthead	Gobids	Golden Redfish
Rahkaissuo																	
Ringkloster*	54%						1%						P				
Rochedane																	
Rockmarshall																	
Rorvik																	
Rottjarnslid																	
Rotterdam-Bergschenhoek	U						U										
Saaijarvi	15																
Saroki																	
Schela Cladovei	411										P						
Segebro							1				P						
Siedlung Forschner																	
Siltapellonhaka	5																
Siltapellonhaka II																	
Skateholm I		6					60+U				P			2			
Skateholm II							5+U				P						
Skipshelleren																	
Solager																	
Spitalhohle																	
Spjalko																	
Sutton																	
Svaerdborg I							5										
Svaerdborg II																	
Svinninge Veijle																	
T Ruoksmaa	1																
Tallikaaro																	
Tashkovo IV																	
Tatsum So																	
Teviec																	
Thatcham																	
Tingbjerggaard																	
Tjikkitrask																	
Toppinen																	
Torkop													3				
Tybrind Vig		?U					U										
Umbusi																	
Uzzo Cave			U					U								U	
Vedbaek Boldbaner																	
Vedbaek Henriksholm Bogebakken*	P						1%				P		49%	1%			
Vedbaek Magleholm*	P						P						68%	P			
Vedbaek Maglemosegard*	1%						2%		P	1%			43%	1%			
Vedbaek Maglemosegards Vaenge*	2%						2%				1%		20%	P			
Vedbaek Stationsvej19*	P						P			15%			68%				
Vedbaek Vaenget Nord*							3%				P		42%				
Vejleby																	
Verup Mose																	
Vidigal					? 2								U		U		
Villingebaek																	
Vinde Helsing-Mose																	
Viste																	
Vlasac	5230																
Yderhede*							8%			P			2%				
Zutphen-Ooijerhock																	
Zvidze																	

Table 6.2a (contd)

Site	Grayling	Greater Weever	Grey Gurnard	Grey Mullet	Gurnard	Haddock	Hake	Hailbut	Herring	Hippoglossidae	Huchen	Ling	Long Rough Dab	Mackerel	Meagre	Mediterranean Moray	Mullet
Abri du Pape																	
Advik -N W Midden House F												2					
Advik -N E Midden House F						6						16					
Advik -N W Midden House B						3						2					
Advik-House F test pit																	
Advik- N E Midden House J						8											
ADVIK TOTAL						17						20					
Aero																	
Agerod Complex																	
Akonge*																	
Almeo																	
Angsnes						4		4									
Annerod						U											
Araguina-Sennola																	
Arapouco															U		
Argus																	
Arlov I																	
Askola																	
Baile Herculane	U																
Balltorp																	
Balma Margineda																	
Birsmatten																	
Bjornsholm*		6%	P		P				P					2%			
Bloksberg																	
Bredasten																	
Bua Vastergard												109					
Cabeco da Amoreira															95		1790
Cabeco da Arruda															15		357
Calbe																	
Calowanie																	
Carstenminde																	
Casteal nan Gillean																	
Cingle Vermell																	
Cnoc Coig																	
Cnoc Sligeach																	
Couze																	
Crouzade																	
Cueva der Nerja																	
Cuina Turcului I																	
Cuina Turcului II																	
Culoz																	
Cushenden																	
Cyclops Cave																	
Dalkey Island II																	U
Dalkey Island V																	
Dammen						U			U			U		U			
Dietfurt Cave																	

Table 6.2a (contd)

Site	Grayling	Greater Weever	Grey Gurnard	Grey Mullet	Gurnard	Haddock	Hake	Halibut	Herring	Hippoglossidae	Huchen	Ling	Long Rough Dab	Mackerel	Meagre	Mediterranean Moray	Mullet
Drosselholm																	
Dudka I																	
Dudka II																	
Ertebolle*			P						1%								
Esperods mosse																	
Faaravejle																	
Falkensteinhöhle	5										1						
Felsstalle																	
Fiskerhuset 6																	
Folenhaus																	
Franchthi Cave																	
Frebergsvik																	
Friesack																	
Goldcliff																	
Gressbakken-House 3 NW Midden					466			3				94					
Gressbakken-House 3 NE Midden					562			8				54					
Gressbakken-House 4 NW Midden					32			1				7					
Gressbakken-House 4 NE Midden					177			2				27					
GRESSBAKKEN - TOTAL					1060			14				182					
Grisby*									P								
Gronehelleren																	
Gropbakkeengen - House 4					22							5					
Haiti-Myllypelto																	
Hallebygaard																	
Havelse																	
Heden																	
Helga Abri																	
Henauhof Nordwest Stratum 6																	
Henauhof Nordwest Stratum 5																	
Henauhof Nordwest Stratum 4																	
Henauhof Nordwest Stratum 3																	
Henauhof Nordwest II																	
Henttala																	
Herdangervidda - Hein 33																	
Herdangervidda - Langesjoen																	
Hitzkirch-Seematt																	
Hoedic																	
Hohen Viecheln																	
Holmegaard I																	
Honkajoki																	
Hoybukt Sydost House 2																	
Inzigkofen	n/a										43						
Jagersshohle																	
Kara-Koba																	
Kassemosse																	
Kervara																	
Klinteso																	
Konnu																	
Kopu I																	
Kopu IV & VIII																	
Kotedalen												U					
Kunda																	
La Riera Asturian																	

Table 6.2a (contd)

Site	Grayling	Greater Weever	Grey Gurnard	Grey Mullet	Gurnard	Haddock	Hake	Halibut	Herring	Hippoglossidae	Huchen	Ling	Long Rough Dab	Mackerel	Meagre	Mediterranean Moray	Mullet
La Riera Azilian																	
Lango																	
Lautereck																	
Lepenski Vir I																	
Lepenski Vir II																	
Loddesborg						2			481					1			
Loona																	
Lough Boora																	
Lundfors A																	
Lundfors B																	
Lystrup Enge*			P						1%					P			
Malerfels																	
Mollegabet I																	
Mollegabet II														U			
Monte Leone																	U
Morton B						5											
Mount Sandel																	
Murzak-Koba																	
Naa Kamae																	
Narva																	
Nederst*		2%							14%					P			
Newferry																	
Nivagard																	
Norslund																	
Norsminde*		P	P						3%					P			
Noyen-sur-Seine																	
Nyelv Nedre Vest - F11 Area 11						1226						179					
Nyelv Nedre Vest - F8 Area 11						4						2					
Nyelv Nedre Vest - F9 Area 11						39				1		3					
Nyelv Nedre Vest - F10 Area 11						107						21					
Nyelv Nedre Vest - F11a Area 11						13						18					
Nyelv Nedre Vest - F13 Area 11						79				4		13					
Nyelv Nedre Vest - Lossoa'a Hus						5											
Nyelv Nedre Vest - Area 4						6						21					
Nyelv Nedre Vest - House 1						2		1				4					
Nyelv Nedre Vest - House 3						9		7				11					
NYELV NEDRE VEST - TOTAL						1490		8		5		272					
Ogaarde																	
Olby Lyng																	
Olmanas							1					MNI 1					
Orelunds Mose																	
Oronsay Sites						U											
Ostenkaer*																	
Ostrovul Banului																	
Padina I											15						
Pietracorba																	
Pobiel 10																	
Pocas de Sao Bento				U											U		
Pont D'Ambon																	
Porvoo																	
Praestelyngen																	
Priory Midden																	
Pulli																	

Table 6.2a (contd)

Site	Grayling	Greater Weever	Grey Gurnard	Grey Mullet	Gurnard	Haddock	Hake	Halibut	Herring	Hippoglossidae	Huchen	Ling	Long Rough Dab	Mackerel	Meagre	Mediterranean Moray	Mullet
Rahkaissuo																	
Ringkloster*																	
Rochedane																	
Rockmarshall																	U
Rorvik						U						U					
Rottjarnslid						12						354					
Rotterdam-Bergschenhoek																	
Saaijarvi																	
Saroki																	
Schela Cladovei																	
Segebro																	
Siedlung Forscher																	
Siltapellonhaka																	
Siltapellonhaka II																	
Skateholm I									119+U				1	2			
Skateholm II									P					1			
Skipshelleren												U					
Solager									U								
Spitalhohle																	
Spjalko									P								
Sutton																	
Svaerdborg I																	
Svaerdborg II																	
Svinninge Veijle																	
T Ruoksmåa																	
Tallikaaro																	
Tashkovo IV																	
Tatsum So																	
Teviec															U		
Thatcham																	
Tingbjerggaard																	
Tjikkitrask																	
Toppinen																	
Torkop					1	1											
Tybrind Vig									U					U			
Umbusi																	
Uzzo Cave																U	
Vedbaek Boldbaner									U								
Vedbaek Henriksholm Bogebakken*		P							P					4%			
Vedbaek Magleholm*									P					1%			
Vedbaek Maglemosegard*		P			P	P			P					P			
Vedbaek Maglemosegards Vaenge*			P						P					P			
Vedbaek Stationsvej19*									4%					P			
Vedbaek Vaenget Nord*					P				P					P			
Vejleby																	
Verup Mose																	
Vidigal														U			
Villingebaek																	
Vinde Helsing-Mose																	
Viste																	
Vlasac																	
Yderhede*		1%	1%														
Zutphen-Ooijerhock																	
Zvidze																	

Table 6.2a (contd)

Site	Orfe	Perch	Pike	Pike-Perch	Pilchard	Pipetfish	Plaice	Plaice/Flounder	Plaice/Flounder/Dab	Pollack	Pollack/Saithe	Porbeagle	Ray	Red scorpionfish	Redfish	River Trout	Roach
Abri du Pape																	
Advik -N W Midden House F																	
Advik -N E Midden House F																	
Advik -N W Midden House B																	
Advik-House F test pit																	
Advik- N E Midden House J																	
ADVIK TOTAL																	
Aero																	
Agerod Complex		76	111														
Akonge*		16%	35%														1%
Almeo		U	U														
Angsnes							30										
Annerod										U							
Araguina-Sennola																	
Arapouco													U				
Argus		U	U														
Arlov I		28					P										
Askola			1														
Baile Herculane																	
Balltorp																	
Balma Margineda																	
Birsmatten																	
Bjornsholm*		P	P						1%								1%
Bloksberg																	
Bredasten		P															
Bua Vastergard								2									
Cabeco da Amoreira			1									2					
Cabeco da Arruda																	
Calbe																	
Calowanie																	
Carstenminde																	
Casteal nan Gillean																	
Cingle Vermell																	U
Cnoc Coig																	
Cnoc Sligeach																	
Couze		U	U														U
Crouzade																	
Cueva der Nerja																	
Cuina Turcului I		1	1														
Cuina Turcului II			2														
Culoz																	
Cushenden																	
Cyclops Cave																	
Dalkey Island II																	
Dalkey Island V																	
Dammen																	
Dietfurt Cave																	

Table 6.2a (contd)

Site	Orfe	Perch	Pike	Pike-Perch	Pitchard	Pipefish	Plaice	Plaice/Flounder	Plaice/Flounder/Dab	Pollack	Pollack/Saithe	Porbeagle	Ray	Red scorpionfish	Redfish	River Trout	Roach
Drosselholm			3														
Dudka I		19	47														8
Dudka II		23	69														12
Ertebolle*		3%	P						P		1%		P				3%
Esperods mosse			MNI 1														
Faaravejle																	
Falkensteinhöhle	6		3														67
Felsstalle																	
Fiskerhuset 6																	
Folnhaus																	
Franchthi Cave																	
Frebergsvik																	
Friesack																	
Goldcliff																	
Gressbakken-House 3 NW Midden							7										
Gressbakken-House 3 NE Midden																	
Gressbakken-House 4 NW Midden							1										
Gressbakken-House 4 NE Midden																	
GRESSBAKKEN - TOTAL							8										
Grisby*									12%								
Gronehelleren										U							
Gropbakkeengen - House 4																	
Haiti-Myllypelto																	
Hallebygaard			3														
Havelse																	
Heden			2														
Helga Abri																	
Henauhof Northwest Stratum 6			1														
Henauhof Northwest Stratum 5			15														
Henauhof Northwest Stratum 4			22														
Henauhof Northwest Stratum 3			23														
Henauhof Northwest II																	
Henttala			2														
Herdangervidda - Hein 33																	
Herdangervidda - Langesjoen																	
Hitzkirch-Seematt			3														
Hoedic													U				
Hohen Viecheln		5	35														
Holmegaard I			U														
Honkajoki		1															
Hoybukt Sydost House 2																1	
Inzigkofen			17														
Jagersshohle																	
Kara-Koba																	
Kasemosse																	
Kervara			2														
Klinteso																	
Konnu		5	12														7
Kopu I			1														
Kopu IV & VIII																	
Kotedalen																	
Kunda		2	66														
La Riera Asturian																	

Table 6.2a (contd)

Site	Orfe	Perch	Pike	Pike-Perch	Pilchard	Pipefish	Plaice	Plaice/Flounder	Plaice/Flounder/Dab	Pollack	Pollack/Saithe	Porbeagle	Ray	Red scorpionfish	Redfish	River Trout	Roach
La Riera Azilian																	
Lango																	
Lautereck																	
Lepenski Vir I																	
Lepenski Vir II																	
Loddesborg		4	6					128									3
Loona			127	6													
Lough Boora																	
Lundfors A																	
Lundfors B			1														
Lystrup Enge*			P				P	23%				P					
Malerfels																	
Mollegabet I																	
Mollegabet II																	
Monte Leone					274												
Morton B																	
Mount Sandel								13									
Murzak-Koba																	
Naa Kamae			3	3													
Narva		1	450	259													
Nederst*								21%									
Newferry																	
Nivagard																	
Norslund																	
Norsminde*						P	P	50%									
Noyen-sur-Seine			P														
Nyelv Nedre Vest - F11 Area 11															1		
Nyelv Nedre Vest - F8 Area 11																	
Nyelv Nedre Vest - F9 Area 11															1		
Nyelv Nedre Vest - F10 Area 11																	
Nyelv Nedre Vest - F11a Area 11																	
Nyelv Nedre Vest - F13 Area 11																	
Nyelv Nedre Vest - Lossoa'a Hus																	
Nyelv Nedre Vest - Area 4																	
Nyelv Nedre Vest - House 1																	
Nyelv Nedre Vest - House 3							1										
NYELV NEDRE VEST - TOTAL							1								2		
Ogaarde			82														
Olby Lyng																	
Olmanas			1														
Orelunds Mose			3														
Oronsay Sites																	
Ostenkaer*			45%														
Ostrovul Banului																	
Padina I																	
Pietracorba																	
Pobiel 10			U														
Pocas de Sao Bento																	
Pont D'Ambon		U	U													U	
Porvoo																	
Praestelyngen		U	78%														U
Priory Midden																	
Pulli				94													

Table 6.2a (contd)

Site	Orfe	Perch	Pike	Pike-Perch	Pitchard	Pipefish	Plaice	Plaice/Flounder	Plaice/Flounder/Dab	Pollack	Pollack/Saithe	Porbeagle	Ray	Red scorpionfish	Redfish	River Trout	Roach
Rahkaissuo			1														
Ringkloster*		12%	27%						1%		P						2%
Rochedane																	
Rockmarshall																	
Rorvik																	
Rottjarnslid								2									
Rotterdam-Bergschenhoek		U	U														
Saaijarvi			13														
Saroki																	U
Schela Cladovei	10		7														
Segebro	1	85	103				P										1
Siedlung Forschner			U														
Siltapellonhaka																	
Siltapellonhaka II			4														
Skateholm I	19	857	1033+U				P					1					133
Skateholm II		917	2317+U				P					4					P
Skipshelleren										U							
Solager																	
Spitalhohle																	
Spjalko		P	P														
Sutton																	
Svaerdborg I			1006														
Svaerdborg II			22														
Svinninge Veijle																	
T Ruksmaa			8														
Tallikaaro			2														
Tashkovo IV																	
Tatsum So																	
Teviec																	
Thatcham																	
Tingbjerggaard			1														
Tjikkitrask																	
Toppinen			1														
Torkop											1						
Tybrind Vig								U									
Umbusi			31														
Uzzo Cave														U			
Vedbaek Boldbaner								U									
Vedbaek Henriksholm Bogebakken*		P	P				P		39%	P							P
Vedbaek Magleholm*			1%						5%								
Vedbaek Maglemosegard*		P	P						46%	P							P
Vedbaek Maglemosegards Vaenge*			P						70%	P							P
Vedbaek Stationsvej19*		P	1%							P							
Vedbaek Vaenget Nord*			1%						46%		P						
Vejleby																	
Verup Mose		1	MNI=6														
Vidigal																	
Villingebaek																	
Vinde Helsing-Mose			12														
Viste																	
Vlasac			11														
Yderhede*									52%			?P					
Zutphen-Ooijerhock			1														1
Zvidze		85	474	2													

Table 6.2a (contd)

Site	Rudd	Ruffe	Russian Sturgeon	Saithe	Salema	Salmon	Salmon/Trout	Salmonid	Sandeel	Sea Bass	Seabream	Seaperch/Grouper	Shad	Shanny	Shark	Silver Bream	Skate	Smelt
Abri du Pape																		
Advik -N W Midden House F				61														
Advik -N E Midden House F				20														
Advik -N W Midden House B				1														
Advik-House F test pit																		
Advik- N E Midden House J				14														
ADVIK TOTAL				96														
Aero																		
Agerod Complex																1		
Akonge*	P						P											
Almeo																		
Angsnes				100														
Annerod																		
Araguina-Sennola																		
Arapouco															U			
Argus																		
Arlov I							1											
Askola																		
Baile Herculane																		
Balltorp																		
Balma Margineda																		
Birsmatten																		
Bjornsholm*	P			P			P	P	P									
Bloksberg																		
Bredasten																		
Bua Vastergard				3														
Cabeco da Amoreira										2	10							
Cabeco da Arruda										1	1							
Calbe																		
Calowanie																		
Carstenminde																		
Casteal nan Gilleaen				U														
Cingle Vermell																		
Cnoc Coig				U														
Cnoc Sligeach				U										U				
Couze																		
Crouzade																		
Cueva der Nerja																		
Cuina Turcului I																		
Cuina Turcului II			7															
Culoz																		
Cushenden																		
Cyclops Cave																		
Dalkey Island II																		
Dalkey Island V																		
Dammen																		
Dietfurt Cave																		

Table 6.2a (contd)

Site	Rudd	Ruffe	Russian Sturgeon	Saithe	Salema	Salmon	Salmon/Trout	Salmonid	Sandeel	Sea Bass	Seabream	Seaperch/Grouper	Shad	Shanny	Shark	Silver Bream	Skate	Smelt
Drosselholm																		
Dudka I	2																	
Dudka II	6																	
Ertebolle*	P			P			P	P										
Esperods mosse																		
Faaravejle																		
Falkensteinhöhle																5		
Felsstalle																		
Fiskerhuset 6																		
Folenhaus																		
Franchthi Cave																		
Frebergsvik																		
Friesack																		
Goldcliff																		62
Gressbakken-House 3 NW Midden				484														
Gressbakken-House 3 NE Midden				616														
Gressbakken-House 4 NW Midden				71														
Gressbakken-House 4 NE Midden				87														
GRESSBAKKEN - TOTAL				1258														
Grisby*							P											
Gronehelleren				U														
Gropbakkeengen - House 4				1														
Haiti-Myllypelto																		
Hallebygaard																		
Havelse																		
Heden																		
Helga Abri																		
Henauhof Northwest Stratum 6																		
Henauhof Northwest Stratum 5																		
Henauhof Northwest Stratum 4																		
Henauhof Northwest Stratum 3																		
Henauhof Northwest II																		
Henttala																		
Herdangervidda - Hein 33																		
Herdangervidda - Langesjoen																		
Hitzkirch-Seematt																		
Hoedic																		
Hohen Viecheln																		
Holmegaard I																		
Honkajoki																		
Hoybukt Sydost House 2				29														
Inzigkofen								8										
Jagersshohle																		
Kara-Koba																		
Kassemosse																		
Kervara																		
Klinteso																		
Konnu																		
Kopu I																		
Kopu IV & VIII																		
Kotedalen																		
Kunda																		
La Riera Asturian																		

Table 6.2a (contd)

	Smelt	Skate	Silver Bream	Shark	Shanny	Shad	Seaperch/Grouper	Seabream	Sea Bass	Sandeel	Salmonid	Salmon/Trout	Salmon	Salma	Saithe	Russian Sturgeon	Ruffe	Rudd	Site
La Riera Azilian							1												
Lango																			
Lautereck																			
Lepenski Vir I																			
Lepenski Vir II																			
Loddesborg											1								
Loona																			
Lough Boora											481								
Lundfors A																			
Lundfors B																			
Lystrup Enge*														P					
Malerfels																			
Mollegabet I																			
Mollegabet II																			
Monte Leone								4					1						
Morton B											1								
Mount Sandel											43	894							
Murzak-Koba																			
Naa Kamae																			
Narva											1								
Nederst*														P					
Newferry																			
Nivagard																			
Norslund																			
Norsminde*														P					
Noyen-sur-Seine																			
Nyelv Nedre Vest - F11 Area 11														592					
Nyelv Nedre Vest - F8 Area 11														1					
Nyelv Nedre Vest - F9 Area 11														81					
Nyelv Nedre Vest - F10 Area 11														44					
Nyelv Nedre Vest - F11a Area 11														20					
Nyelv Nedre Vest - F13 Area 11														51					
Nyelv Nedre Vest - Lossoa'a Hus														2					
Nyelv Nedre Vest - Area 4														99					
Nyelv Nedre Vest - House 1														9					
Nyelv Nedre Vest - House 3														78					
NYELV NEDRE VEST - TOTAL														977					
Ogaarde																			
Olby Lyng																			
Olmanas																			
Orelunds Mose																			
Oronsay Sites																			
Ostenkaer*																			
Ostrovul Banului																			
Padina I																			
Pietracorba																			
Pobiel 10																			
Pocas de Sao Bento																			
Pont D'Ambon																			
Porvoo																			
Praestelyngen																	U		
Priory Midden															U				
Pulli																			

Table 6.2a (contd)

Site	Rudd	Ruffe	Russian Sturgeon	Saithe	Salmon	Salmon Trout	Salmonid	Sandeel	Sea Bass	Seabream	Seaperch/Grouper	Shad	Shanny	Shark	Silver Bream	Skate	Smelt
Rahkaissuo																	
Ringkloster*	P	P				P									P		
Rochedane																	
Rockmarshall																	
Rorvik																	
Rottjarnslid																	
Rotterdam-Bergschenhoek		U															
Saaijarvi																	
Saroki																	
Schela Cladovei																	
Segebro																	
Siedlung Forscher																	
Siltapellonhaka																	
Siltapellonhaka II																	
Skateholm I	P					19									P		
Skateholm II	P					20									P		
Skipshelleren				U		U											
Solager																	
Spitalhohle																	
Spjalko	P																
Sutton																	
Svaerdborg I																	
Svaerdborg II																	
Svinninge Veijle																	
T Ruoksmaa							2										
Tallikaaro							2										
Tashkovo IV														3			
Tatsum So																	
Teviec																	
Thatcham																	
Tingbjerggaard																	
Tjikkitrask																	
Toppinen																	
Torkop																	
Tybrind Vig					U		U										
Umbusi																	
Uzzo Cave																	
Vedbaek Boldbaner				U													
Vedbaek Henriksholm Bogebakken*				P		P						P					
Vedbaek Magleholm*																	
Vedbaek Maglemosegard*				P		P	P										
Vedbaek Maglemosegards Vaenge*	P					P	P										
Vedbaek Stationsvej19*	P						P										
Vedbaek Vaenget Nord*						P											
Vejleby																	
Verup Mose																	
Vidigal											U						
Villingebaek																	
Vinde Helsing-Mose																	
Viste																	
Vlasac																	
Yderhede*						1%											
Zutphen-Ooijerhock																	
Zvidze																	

Table 6.2a (contd)

Site	Smoothhound	Sole	Spanish Seabream	Spurdog	Squalius cephalus	Sterlet	Stickleback	Stingray	Sturgeon	Swordfish	Tench	Thornback ray	Three-spined Stickleback	Tope	Tope/Smoothhound	Torsk	Trout	Tub Gurnard
Abri du Pape																		
Advik -N W Midden House F															3			
Advik -N E Midden House F																		
Advik -N W Midden House B																		
Advik-House F test pit																		
Advik- N E Midden House J																		
ADVIK TOTAL															3			
Aero																		
Agerod Complex											25							
Akonge*											3%							
Almeo																		
Angsnes																		
Annerod																		
Araguina-Sennola																		
Arapouco																		
Argus																		
Arlov I				9														
Askola																		
Baile Herculane																		
Balltorp																		
Balma Margineda																	U	
Birsmatten																		
Bjornsholm*	P			P				P			P		7%				P	
Bloksberg																		
Bredasten																		
Bua Vastergard																		
Cabeco da Amoreira														11				
Cabeco da Arruda														1				
Calbe																		
Calowanie																		
Carstenminde																		
Casteal nan Gillean																		
Cingle Vermell																	U	
Cnoc Coig																		
Cnoc Sligeach																		
Couze																		
Crouzade																		
Cueva der Nerja																		
Cuina Turcului I																		
Cuina Turcului II						4												
Culoz																		
Cushenden																		
Cyclops Cave																		
Dalkey Island II														U?				
Dalkey Island V																		
Dammen				U														
Dietfurt Cave																		

Table 6.2a (contd)

Site	Smoothhound	Sole	Spanish Seabream	Spurdog	Squalius cephalus	Sterlet	Stickleback	Stingray	Sturgeon	Swordfish	Tench	Thornback ray	Three-spined Stickleback	Tope	Tope/Smoothhound	Torsk	Trout	Tub Gurnard
Drosselholm																		
Dudka I											1							
Dudka II											1							
Ertebolle*				P									1%					
Esperods mosse																		
Faaravejle																		
Falkensteinhöhle					8													
Felsställe																		
Fiskerhuset 6																		
Folenhaus																		
Franchthi Cave																		
Frebergsvik																		
Friesack																		
Goldcliff													46					
Gressbakken-House 3 NW Midden															33			
Gressbakken-House 3 NE Midden															28			
Gressbakken-House 4 NW Midden																		
Gressbakken-House 4 NE Midden																		
GRESSBAKKEN - TOTAL															61			
Grisby*																		
Gronehelleren																		
Gropbakkeengen - House 4																		
Haiti-Myllypelto																		
Hallebygaard																		
Havelse																		
Heden																		
Helga Abri																		
Henauhof Nordwest Stratum 6																		
Henauhof Nordwest Stratum 5																		
Henauhof Nordwest Stratum 4																		
Henauhof Nordwest Stratum 3																		
Henauhof Nordwest II																		
Henttala																		
Herdangervidda - Hein 33																	U	
Herdangervidda - Langesjoen																	U	
Hitzkirch-Seematt																		
Hoedic																		
Hohen Viecheln																		
Holmegaard I																		
Honkajoki																		
Hoybukt Sydost House 2																		
Inzigkofen																		
Jagershöhle																		
Kara-Koba																		
Kassemosse																		
Kervara																		
Klinteso																		
Konnu																		
Kopu I																		
Kopu IV & VIII																		
Kotedalen																U		
Kunda																		
La Riera Asturian																		

Table 6.2a (contd)

Site	Smoothhound	Sole	Spanish Seabream	Spurdog	Squalius cephalus	Sterlet	Stickleback	Stingray	Sturgeon	Swordfish	Tench	Thornback ray	Three-spined Stickleback	Tope	Tope/Smoothhound	Torsk	Trout	Tub Gurnard
La Riera Azilian										1							4	
Lango																		
Lautereck																		
Lepenski Vir I																		
Lepenski Vir II																		
Loddesborg																		
Loona																		
Lough Boora																	U	
Lundfors A																		
Lundfors B																		
Lystrup Enge*	P			P														
Malerfels																		
Mollegabet I																		
Mollegabet II				U														
Monte Leone			U															
Morton B																		
Mount Sandel																	568	
Murzak-Koba																		
Naa Kamae																		
Narva																		
Nederst*				P									1%					
Newferry																		
Nivagard																		
Norslund																		
Norsminde*				P									P					
Noyen-sur-Seine																		
Nyelv Nedre Vest - F11 Area 11																110		
Nyelv Nedre Vest - F8 Area 11																1		
Nyelv Nedre Vest - F9 Area 11																5		
Nyelv Nedre Vest - F10 Area 11																22		
Nyelv Nedre Vest - F11a Area 11																		
Nyelv Nedre Vest - F13 Area 11																		
Nyelv Nedre Vest - Lossoa'a Hus																		
Nyelv Nedre Vest - Area 4																4		
Nyelv Nedre Vest - House 1																4		
Nyelv Nedre Vest - House 3																		
NYELV NEDRE VEST - TOTAL																146		
Ogaarde																		
Olby Lyng																		
Olmanas																		
Orelunds Mose																		
Oronsay Sites												U						
Ostenkaer*																		
Ostrovul Banului						U												
Padina I									8									
Pietracorba																		
Pobiel 10											U							
Pocas de Sao Bento																		
Pont D'Ambon																		
Porvoo																		
Praestelyngen				1							U							
Priory Midden																		
Pulli																		

Table 6.2a (contd)

Site	Smoothhound	Sole	Spanish Seabream	Spurdog	Squalius cephalus	Sterlet	Stickleback	Stingray	Sturgeon	Swordfish	Tench	Thornback ray	Three-spined Stickleback	Tope	Tope/Smoothhound	Torsk	Trout	Tub Gurnard
Rahkaissuo																		
Ringkloster*																		
Rochedane																		
Rockmarshall		U?												U?				
Rorvik																		
Rottjarnslid																		
Rotterdam-Bergschenhoek																		
Saaijarvi																		
Saroki																		
Schela Cladovei					59			110										
Segebro				17														
Siedlung Forschner																		
Siltapellonhaka																		
Siltapellonhaka II																		
Skateholm I											36+U		1+U					
Skateholm II											P		P					
Skipshelleren																		
Solager																		
Spitalhohle																		
Spjalko											P		P					
Sutton																		
Svaerdborg I											1							
Svaerdborg II																		
Svinninge Veijle								U										
T Ruksmaa																		
Tallikaaro																		
Tashkovo IV																		
Tatsum So								U										
Teviec																		
Thatcham																		
Tingbjerggaard																		
Tjikkitrask																		
Toppinen																		
Torkop																		
Tybrind Vig				U										U				
Umbusi																		
Uzzo Cave																		
Vedbaek Boldbaner																		
Vedbaek Henriksholm Bogebakken*				3%								P	P					
Vedbaek Magleholm*				22%														
Vedbaek Maglemosegard*				P														
Vedbaek Maglemosegards Vaenge*				1%								P	P					P
Vedbaek Stationsvej19*				P														
Vedbaek Vaenget Nord*				4%								P						
Vejleby																		
Verup Mose											1							
Vidigal	376																	
Villingebaek																		
Vinde Helsing-Mose																		
Viste																		
Vlasac																		
Yderhede*				32%									1%	P	P			
Zutphen-Ooijerhock																		
Zvidze																		

Table 6.2a (contd)

Site	Tuna	Turbot	Turbot/Brill	Viviparous Blenny	Whitefish	Whiting	Wolf-fish	Wrasse	Zander
Abri du Pape									
Advik -N W Midden House F									
Advik -N E Midden House F									
Advik -N W Midden House B									
Advik-House F test pit									
Advik- N E Midden House J									
ADVIK TOTAL									
Aero									
Agerod Complex									
Akonge*									
Almeo									
Angsnes									
Annerod	U					U			
Araguina-Sennola									
Arapouco									
Argus									U
Arlov I									
Askola									
Baile Herculane									
Balltorp									
Balma Margineda									
Birsmatten									
Bjornsholm*		P		P	P				
Bloksberg									
Bredasten									
Bua Vastergard									
Cabeco da Amoreira									
Cabeco da Arruda									
Calbe									
Calowanie									
Carstenminde									
Casteal nan Gillean									
Cingle Vermell									
Cnoc Coig									
Cnoc Sligeach									
Couze									
Crouzade									
Cueva der Nerja									
Cuina Turcului I									10
Cuina Turcului II									5
Culoz									
Cushenden									
Cyclops Cave	U								
Dalkey Island II									
Dalkey Island V								U	
Dammen						U			
Dietfurt Cave									

Table 6.2a (contd)

Table 6.2a (contd)

Site	Tuna	Turbot	Turbot/Brill	Viviparous Blenny	Whitefish	Whiting	Wolf-fish	Wrasse	Zander
La Riera Azilian									
Lango									
Lautereck									
Lepenski Vir I									
Lepenski Vir II									
Loddesborg	1			1					
Loona		25							
Lough Boora									
Lundfors A									
Lundfors B									
Lystrup Enge*			P	P		P			
Malerfels									
Mollegabet I									
Mollegabet II									
Monte Leone									
Morton B		1							
Mount Sandel									
Murzak-Koba									
Naa Kamae		14							
Narva									
Nederst*			P	2%					
Newferry									
Nivagard									
Norslund									
Norsminde*			P	P					
Noyen-sur-Seine									
Nyelv Nedre Vest - F11 Area 11							2		
Nyelv Nedre Vest - F8 Area 11									
Nyelv Nedre Vest - F9 Area 11									
Nyelv Nedre Vest - F10 Area 11									
Nyelv Nedre Vest - F11a Area 11									
Nyelv Nedre Vest - F13 Area 11									
Nyelv Nedre Vest - Lossoa'a Hus									
Nyelv Nedre Vest - Area 4									
Nyelv Nedre Vest - House 1									
Nyelv Nedre Vest - House 3									
NYELV NEDRE VEST - TOTAL							2		
Ogaarde									
Olby Lyng									
Olmanas									
Orelunds Mose									
Oronsay Sites									
Ostenkaer*					27%				
Ostrovul Banului									U
Padina I									
Pietracorba									
Pobiel 10									
Pocas de Sao Bento									
Pont D'Ambon									
Porvoo									
Praestelyngen									
Priory Midden									
Pulli									

Table 6.2a (contd)

Site	Tuna	Turbot	Turbot/Brill	Viviparous Blenny	Whitefish	Whiting	Wolf-fish	Wrasse	Zander
Rahkaissuo									
Ringkloster*									
Rochedane									
Rockmarshall									
Rorvik									
Rottjarnslid									
Rotterdam-Bergschenhoek									
Saaijarvi									
Saroki									
Schela Cladovei									
Segebro									1
Siedlung Forscher									
Siltapellonhaka									
Siltapellonhaka II									
Skateholm I		40							
Skateholm II		P							
Skipshelleren									
Solager									
Spitalhohle									
Spjalko									
Sutton									
Svaerdborg I									
Svaerdborg II									
Svinninge Veijle									
T Ruoksmaa									
Tallikaaro									
Tashkovo IV									
Tatsum So									
Teviec								U	
Thatcham									
Tingbjerggaard									
Tjikkitrask									
Toppinen									
Torkop									
Tybrind Vig				U					
Umbusi									
Uzzo Cave									
Vedbaek Boldbaner			U						
Vedbaek Henriksholm Bogebakken*			P			P			
Vedbaek Magleholm*			P						
Vedbaek Maglemosegard*			P			P			
Vedbaek Maglemosegards Vaenge*				P		P			
Vedbaek Stationsvej19*			P		P	P			
Vedbaek Vaenget Nord*			1%			P			
Vejleby									
Verup Mose									
Vidigal									
Villingebaek									
Vinde Helsing-Mose									
Viste									
Vlasac									
Yderhede*				1%					
Zutphen-Ooijerhock									
Zvidze									

Table 6.2a (contd)

- * - sites included in Enghoff's archaeo-ichthyological study of Mesolithic Denmark
- U - unspecified quantity recovered
- P - present in insufficient quantities to be included in numerical analyses of sites

Table 6.2b - Comments on Fish Assemblages from Mesolithic Sites

Site	Comments
Abri du Pape	abundant in stratum 20
Advik -N W Midden House F	total fish=147: total fauna=177
Advik -N E Midden House F	total fish=663: total fauna=1392
Advik -N W Midden House B	total fish=24: total fauna=223
Advik-House F test pit	total fish=4: total fauna=102
Advik- N E Midden House J	total fish=47: total fauna=103
ADVIK TOTAL	total fish=885 : total fauna=1997
Akonge*	fish identified=5404: P=<1%
Almeo	fish=30% total fauna
Angsnes	total fish=308: total fauna=898
Argus	abundant fish: only 29 elements identified to species
Bjornsholm*	total fish=11490 elements: P=<1%
Bua Vastergard	total fish=323: total fauna=387
Cabeco da Amoreira	total fauna=46230
Cabeco da Arruda	total fauna=10064
Cuina Turcului I	total fauna=613: total fish=147
Cuina Turcului II	total fauna=495 : total fish=75
Cushenden	total fauna=495: total fish=72
Cyclops Cave	over 100 species identified
Dalkey Island II	mullet rare
Dalkey Island V	cod & wrasse rare
Dietfurt Cave	407 fish identified to 10 species (not published)
Drosselholm	total fauna=31
Dudka I	total fish=90: total fauna=164
Dudka II	total fish=180: total fauna 250
Ertebolle*	fish identified=9462: P=<1% - column sample
Esperods mosse	pike assoc w bbp
Falkensteinhöhle	total fish=86: total other fauna=1599
Felsstalle	fish 10% total fauna=117bones identified of 1832 recovered
Frebergsvik	total fauna=766
Goldcliff	total fish 812: total fauna=1812
Gressbakken-House 3 NW Midden	total fish=8328: total fauna=10851
Gressbakken-House 3 NE Midden	total fish=10096: total fauna=11671
Gressbakken-House 4 NW Midden	fish=781 - no resemblance to table, results adjusted: fauna=1628
Gressbakken-House 4 NE Midden	total fish=1282: total fauna=2924
GRESSBAKKEN - TOTAL	total fish=20487: total fauna=27074
Grisby*	fish identified=1680: P=<1%
Gronehelleren	fish = 58% of total fauna (=453): cod, pollack & coalfish dom
Gropbakkeengen - House 4	total fish=195: total fauna=235
Haiti-Mylllypelto	total fauna=2
Hallebygaard	total fish=3: total fauna=87
Heden	total fauna=227
Helga Abri	fish & small mammals dom
Henauhof Northwest Stratum 6	total identified fauna=20: total fauna=92: total fish=5
Henauhof Northwest Stratum 5	total identified fauna=88: total fauna=206: total fish=27
Henauhof Northwest Stratum 4	total identified fauna=207: total fauna=811: total fish=63
Henauhof Northwest Stratum 3	total identified fauna=272: total fauna=972: total fish=133
Henauhof Northwest II	total fauna=156
Henttala	total fish=3: total fauna=38
Hohen Viecheln	total fish = 41: total fauna = 1560 (excl birds)
Hoybukt Sydost House 2	total fish=102: total fauna=234
Kopu IV & VIII	at this Meso site all remains are common freshwater/brackish species
Kotedalen	12 species in total
Kunda	fish 1.53% of assem., terrestrial 97.4%: total assemblage = 6944bones
Lango	swordfish=simple point
Lauterack	fish=85% of total fauna: total fauna=830
Lepenski Vir I	total fauna=424: total fish= 243
Lepenski Vir II	total fauna=206: total fish=53
Lundfors A	total fauna=239
Lundfors B	total fauna=101
Lystrup Enge*	fish identified=9233 elements: P=<1%
Malerfels	6 species: fish dom level Ib
Mollegabet II	piked dogfish + mackerel + flatfish =5% : 1 eel vert
Monte Leone	thousands of fish vertebrae: only sample D4-VIII quantified
Mount Sandel	total fauna = 2192: total fish = 1784; total bird = 79; total mammal = 329
Narva	total assemblage = 1449

Table 6.2b (contd)

Site	Comments
Nederst*	fish identified=6476: P=<1%
Newferry	113= vertebrae of salmonid and eel
Norsminde*	fish identified=9158: P=<1%
Nyelv Nedre Vest - F11 Area 11	total fish=4694: total fauna=4901
Nyelv Nedre Vest - F8 Area 11	total fish=35: total fauna=61
Nyelv Nedre Vest - F9 Area 11	total fish=346: total fauna=393
Nyelv Nedre Vest - F10 Area 11	total fish=727: total fauna=836
Nyelv Nedre Vest - F11a Area 11	total fish=333: total fauna=431
Nyelv Nedre Vest - F13 Area 11	total fish=458: total fauna=488
Nyelv Nedre Vest - Lossoa'a Hus	total fish=60: total fauna=152
Nyelv Nedre Vest - Area 4	total fish=310: total fauna=410
Nyelv Nedre Vest - House 1	total fish=156: total fauna=304
Nyelv Nedre Vest - House 3	total fish=1061: total fauna=2202
NYELV NEDRE VEST - TOTAL	total fish=8180
Ogaarde	total fish=115: total fauna=1296
Olby Lyng	3864 fish bones: total faunal assemblage not specified
Olmanas	total fish=16: total fauna=31
Orelunds Mose	total fish=4: total fauna=19
Ostenkaer*	fish identified=11 elements
Padina I	total fish=367: total fauna=1653
Pocas de Sao Bento	perf fish vertebrae = ornament
Praestelyngen	total identified fish = 4000 elements
Rahkaissuo	total fish=2: total fauna=12
Ringkloster*	fish identified=941: P=<1%
Rottjarnslid	total fish=477: total fauna=587
Schela Cladovei	total identified fauna = 903: total ident fish = 886
Siltapellonhaka	total fish=9: total fauna=68
Siltapellonhaka II	total fish=16: total fauna=46
Skateholm I	pike, rudd, roach, silverbream, bream, tench=many at SK I & II in graves + settlements
Skateholm II	pike, perch & stickleback = 100 in grave IX
Skipshelleren	17 species
Spitalhohle	fish & birds dom
Svaerdborg I	pike from 1917 & 1943 excls: pike dom
Svinninge Veijle	stingray = tail spine
T Ruoksmåa	total fish=20: total fauna=99
Tallikaaro	total fish=9: total fauna=78
Tashkovo IV	3 shark teeth from Indian/Atlantic Ocean
Tatsum So	stingray = tail spine
Teviec	many pharyngeal wrasse teeth: meagre mandible=incised
Tingbjerggaard	total fish=4: total fauna=47
Tjikkitrask	total fauna=193
Toppinen	total fauna=13
Torkop	total ident fish=6 total fish=21, total ident fauna=110, total fauna=1185
Tybrind Vig	cod dom: flatfish, spurdog & stickleback common
Vedbaek Boldbaner	total 23 elements
Vedbaek Henriksholm Bøgebakken*	fish identified=10893: P=<1%
Vedbaek Magleholm*	fish identified=650: P=<1%
Vedbaek Maglemosegard*	fish identified=12784: P=<1%
Vedbaek Maglemosegards Vaenge*	fish identified=6324: P=<1%
Vedbaek Stationsvej19*	fish identified=4547: P=<1%
Vedbaek Vaenget Nord*	fish identified=734: P=<1%
Verup Mose	total fauna=18
Vidigal	total of unspecified species = 46 elements
Vinde Helsing-Mose	total fauna=57
Viste	11 species: cod dom
Vlasac	total fish = 17448:total fauna = 29098
Yderhede*	fish identified=523: P=<1%: NOTE Enghoff 1995 gives 116 as fish total
Zutphen-Ooijerhock	total fauna=91
Zvidze	total fish=567

Table 6.3 - Database of Artifacts

SITE	Arrows	Ballast Stone	Blubber Lamp	Gunwhale	Boat	Points (unspecified)	Simple Points	Bi-Points	Barbed Points	Barbed Point (rough out)	Slotted Points	Spear Shaft	Bow	Clubs	Fish Adornment	Floats	Floats (single hole - wood)
Abri Cornville							1										
Abri de Chinchon									1								
Acy									1								
Advik									2								
Aero					1^	U			2								1?
Agernaes					1?												
Agerod Id							1		1		1						
Agerod I:HC	1?					66			8		33						
Agerod I-III																	
Agerod V	U								2		1		U				
Aggarps mosse									1								
Aggersund							1										
Alby									1		U						
Allersbog					1?^												
Amrum									1								
Antrea																	
Appels									U								
Arhus									2								
Aveline's Hole									1								
Backaskog							1				1						
Ballyholme							1										
Bare Mosse																	1
Barleben													1				
Barmose									1								
Barnewitz									1								
Barnow									1								
Battersea									1								
Bernaufels									1								
Bethune									3								
Birkemosse									1								
Birmatten							6		3								
Bize, Petite Grotte						U			1								
Bize, Grande Grotte									U								
Bjeresjo									1								
Bjornsholm							21										
Bloksbjerg			1				23	1	3		7						
Bogge II																	
Bornholm									3								
Bothildenslunds									1								
Brabrand			2						16				2?				
Brandenburg									U		U						
Brandesburton									6								
Brodersby									1								
Bua Vastergard									U								
Bussjo mosse											1						
Calbe									1								
Carstenminde									1		3						
Casteal nan Gilleaen I							U		11								
Castillo									1								
Charlottenlund											1						

Table 6.3 (contd)

SITE	Arrows	Ballast Stone	Blubber Lamp	Gunwhale	Boat	Points (unspecified)	Simple Points	Bi-Points	Barbed Points	Barbed Point (rough out)	Slotted Points	Spear Shaft	Bow	Clubs	Fish Adornment	Floats	Floats (single hole - wood)
Climente							1		1								
Cnoc Coig							4										
Cnoc Sligeach									3								
Copenhagen											1						
Cranz							1										
Crouzade							U										
Cuina Turcului II																	
Culoz									U								
Cyclops Cave																	
Dammen																	
Davlekanovo									2								
Deviete									1								
Dietfurt															U		
Djursnas									1								
Dobbertin							2		2								
Dohren									1								
Druimvargie									1								
Dyrholm							U		U								
Dummersee									1								
Duvensee						1	2		1								
Earls Barton									1								
Eckersdorf									U								
El Pendo									8								
Elbing											1						
Ellemose											1						
Ellerbek	U								U								
Emmererfscheidenveen									1								
Emmersboek									5								
Ermitia									1								
Ertebolle							U										
Esperods mosse									2								
Europoort									434								
Evenhus																	
Faareveile			1														
Falkensteinhöhle									4								
Fals Mosse									1								
Faurelie II						U											
Federsee							1										
Felsstalle						7											
Fernewerder							U		U								
Fienerode							1										
Fjellenstrup									1								
Flatow							1										
Flynderhage					1?						1						
Folenhaus																	
Fohr									1								
Forslev																	
Franchthi Cave					Imp.												
Friarton					1												
Friesack					1?	284	U		U								
Froser Seelandereien							1										

Table 6.3 (contd)

SITE	Arrows	Ballast Stone	Blubber Lamp	Gunwhale	Boat	Points (unspecified)	Simple Points	Bi-Points	Barbed Points	Barbed Point (rough out)	Slotted Points	Spear Shaft	Bow	Clubs	Fish Adornment	Floats	Floats (single hole - wood)
Funen Island																	
Gasen																	
Gislinge									1		1						
Gniewino									1								
Godsted			2														
Gohra-Worle									U								
Gourris									4								
Gorlev									3								
Goyet Cave															1		
Grena									1								
Gr-Steegan									1								
Gressbakken									U								
Gronehelleren									1		1						
Gropbakkeengen						2											
Grotte de Pegourie									3								
Grotte des Harpons									U								
Grotte Massat									U								
Gudso Vig			1+ 5 frags				U		U								
Gusev							1										
Haljarp																	
Hallebygaard							1										
Halsskov					1												
Hamme									U								
Hanger									1								
Hardinxveld-Giessendam													1				
Hassing Osterkaer									1								
Hastefjorden									1								
Haubolle									1								
Havelland							U		U		U						
Hemmor									1								
Henauhof Nord II																	
Henauhof Nordwest Stratum 6							1										
Henauhof Nordwest Stratum 5							1										
Henauhof Nordwest Stratum 4							119										
Henauhof Nordwest Stratum 3							49	1									
Herlufmagle									7								
Hesselbjerggaard																	
Heusden									1								
Hinge So									1								
Hirtzkirch-Seematt						U			U							U	
Hjembaek											1						
Hoedic						5											
Hofderup											1						
Hohen Viecheln						25	33		267			1				26	
Hoilandsvandet											2						
Holmegaard I							22		51		U			2			
Holmegaard IV		U					U						2				
Holmegaard V									2								
Hook of Holland									U								
Horninge Mosse									2								
Horne									5								

Table 6.3 (contd)

SITE	Arrows	Ballast Stone	Blubber Lamp	Gunwhale	Boat	Points (unspecified)	Simple Points	Bi-Points	Barbed Points	Barbed Point (rough out)	Slotted Points	Spear Shaft	Bow	Clubs	Fish Adornment	Floats	Floats (single hole - wood)
Hornsea									1								
Horsensfjord									1								
Huseby Klev															1		
Husum					1												
Hylteberga mosse											1						
Icoana							2										
Ingelstad									1								
Inzigkofen							3		2								
Isbergues									1								
Istaby									4								
Isturitz									U								
Jagershohle							U		1								
Jara Bank																	
Jaravallen			1														
Jonstorp																	
Jonstrup Vaenge									1								
Jordlose Mose II									2								
Kallingemore mosse									1								
Kalundborg																	
Kara-Koba									U								
Karby									2								
Kassemosse											2						
Kents Cavern									3								
Kildegaard							1										
Kildegaard Ost							7		2								
KI Machnow																	
Klubba																	
Kolding Fjord			3				1		1								
Kolind I							5		1		1						
Kongemose											1						
Kongemosen V							2										
Kongsted									6								
Konnu									U								
Kopu									U								
Koster									1								
Kosuchen											1						
Krampkewitz									1								
Kulm																	
Kunda							3	U	4		1						
Kusserow							2										
Kvernevika																	
La Haine											1						
La Paloma									2								
La Riera Azilian								1?	1								
La Tourasse						11			5								
La Vache									4								
Lachmirovice									1								
Lake Lubana									4								
Lammefjord																	
Langeland Island											1						
Lango			1				1		1								

Table 6.3 (contd)

SITE	Arrows	Ballast Stone	Blubber Lamp	Gunwhale	Boat	Points (unspecified)	Simple Points	Bi-Points	Barbed Points	Barbed Point (rough out)	Slotted Points	Spear Shaft	Bow	Clubs	Fish Adornment	Floats	Floats (single hole - wood)
Lapsi VII									1								
Lattmoor									1								
Laugerie Basse									8								
Lautereck							3										
Le Trou Violet							5		1								
Leiknes																	
Leman/Ower									1								
Lepenski Vir							2							U	U		
Liesbergmuli 6									5								
Lille Knabstrup																	
Lille Loshult	1																
Lillebaelt									1								
Limhamn																	
Lindholm I																	
Lippe									1								
Lohusu									3								
Lojesmolle							3		9		2						
Longuerocche									2								
Lorby									1								
Lorthet						24			1								
Los Azules I							U		19								
Lumentxa									1								
Lundfors																	
Lystrup I					1												
MacArthurs Cave							2		2								
Magdeburg									1								
Magleo			U		U		6		1								
Maisieres									1								
Marietorp									1								
Marievka																	
Marzenin									1								
Mas D'Azil						97			20								
Mazaculos								U									
Mechelen									U								
Mecklenburg								U	U								
Meiendorf							U	U	U								
Meilgard																	
Melle									2								
Mendrienen																	
Menturren											1						
Mitteldorf							1										
Mjallby mosse									1								
Moen									2								
Mollegabet I	U		1				U		20				U				1
Mollegabet II					1^		U		1+U				1				
Monster									3								
Montfort									2								
Morgi									1								
Morin									1								
Morke Enge									20								

Table 6.3 (contd)

SITE	Arrows	Ballast Stone	Blubber Lamp	Gunwhale	Boat	Points (unspecified)	Simple Points	Bi-Points	Barbed Points	Barbed Point (rough out)	Slotted Points	Spear Shaft	Bow	Clubs	Fish Adornment	Floats	Floats (single hole - wood)
Muldbjerg																	
Mullerup								U	72		1						
Multorp											1						
Murzak-Koba									1								
N f Lilleo									3								
Naebbet									2								
Narpes									1								
Narva																	
Nasbyholm																	
Nebbe Mosse																	
Nederst																	
Nekselo																	
Neu Jucha									1								
Neu Strelitz									1								
Neught																	
Newferry							3										
Nidlose																	
Ninove											1						
Nitki																	
Nivagaard											4-5						
Nizhnee Veret'e	U					68	U		U				16			6	
Nizhnee Veret'e I							3		U								
Noddekonge																	
Nolgarden									1								
Nord de Bruxelles									1								
Norrkopping									1								
Norsminde							U										
Novgorod																	
Nowa								2	2								
Noyen-sur-Seine					1												
Nyelv Nedre Vest							6		9	1							
Obourg											1						
Odense									1								
Odmut									56								
Odsherred									1	1							
Offerdals									1								
Ogaarde			1		1			361	115	7							
Oleni Ostrov							1		2								
Orebro									1								
Ornskoldvik									1								
Oslo																	
Ossowo									9								
Ostroleka																	
Ostrovul Banului																	
Ostrovul Mare							10	1									
Oulu									1								
Oxie									1								
Padina I						U	5	1									
Paris									1								
Peitschendorf									1								
Penken									1								

Table 6.3 (contd)

SITE	Arrows	Ballast Stone	Blubber Lamp	Gunwhale	Boat	Points (unspecified)	Simple Points	Bi-Points	Barbed Points	Barbed Point (rough out)	Slotted Points	Spear Shaft	Bow	Clubs	Fish Adornment	Floats	Floats (single hole - wood)
Pentekinnen									1								
Pesse					1^												
Perkallen											1						
Pernau	U								7		U						
Pilhagen																	
Pobiel 10						1											
Pocas de Sao Bento						U											
Pommeroeul									1								
Pont D'Ambon							U		1								
Porsemose									1								
Porth-y-waen									1								
Poulton-le-Flyde									2								
Praestelyngen					1												
Praesto									1								
Priestermoor																	
Rabelovsjon									4		1						
Raklev											1						
Randers									1		1						
Rascano									2								
Reddies																	
Reilhac									7								
Rerslev									6								
Retschwil-Stafligen II																U	
Rheinbalm									2								
Rhodes II									U								
Ringkloster	1				1		U						3				
Ringsjon									1								
Ringsted							1										
Risga									1								
Rochfort									1								
Rodoy																	
Rogaland									1		U						
Romsey																	
Ronneholms mosse									1								
Rosenhof									U								
Rotterdam-Bergschenhoek																	
Rottjarnslid									1		3						
Royston									1								
Rude II							1		U							U	
Rugen									U								
Ruskeneset			1														
Ruthenie											1						
Salies du Salat									1								
Salitre									1								
Sandhuse Mose							1										
Sandlyng Skov									U								
Satrup							1						U				
Schela Cladovei							20										
Schlusbeker Moor																	
Schotz									1								
Schoonaerde									1								

Table 6.3 (contd)

SITE	Arrows	Ballast Stone	Blubber Lamp	Gunwhale	Boat	Points (unspecified)	Simple Points	Bi-Points	Barbed Points	Barbed Point (rough out)	Slotted Points	Spear Shaft	Bow	Clubs	Fish Adornment	Floats	Floats (single hole - wood)
Seamer Carr	1										1?						
Segebro						U	1		1								
Shewalton									1								
Shigirskiy																	
Siedlung Forschner							1										
Siggeneben Sud									U								
Siivertsi							1		U								
Silkeborg So																	
Siretorp									2								
Sjalko									1								
Sjodiken																	
Sjoholmen							58		7		48				1		
Skaftlev									1								
Skalstrup															2		
Skane									1		1						
Skateholm I									1								
Skateholm II					1?^				1								
Skellingsted Bro									14		7						
Skellingsted Mose Nord							4		4		1						
Skipsea									1								
Skipshelleren							25		18		12						
Skjavik									U								
Skjoldnaes									2								
Skottemarke									14								
Skurups									1								
Slagelseegen									2								
Soborg Lake																	
Soborg So							2				1						
Soholm											1						
Solager									U								
Sonderholm																	
Sonderod							2		4								
Sorbehen									1								
Sproughton I									1								
Sproughton II									1								
Stammebad																	
Star Carr									191								
Stellmoor									U								
Stensballe Sund																	
Stokkeborg											1						
Stora Bjers											1						
Stora Dode mosse											2						
Stora Forvar-Stora Karlso									15		U						
Store Vildmose									1								
Strand																	
Strandegaard			1														
Stryno Basin							102										
Svaerdborg I						89	15		90	2	3						
Svaerdborg I-Pre-Excavation							6		15		1						
Svaerdborg II									32								

Table 6.3 (contd)

SITE	Arrows	Ballast Stone	Blubber Lamp	Gunwhale	Boat	Points (unspecified)	Simple Points	Bi-Points	Barbed Points	Barbed Point (rough out)	Slotted Points	Spear Shaft	Bow	Clubs	Fish Adornment	Floats	Floats (single hole - wood)
Svedstrup									3								
Sventoji									2								
Svinninge Vejle									1								
Szurguponen									2								
Taaderup									1								
Tange									1								
Tannstock							1										
Tarvastu										1							
Teviec							16	6							1		
Thatcham						3	8	1									
Tingbjerggaard							1										
Tisso									1								
Tjorn											1						
Tlokowo											1						
Torning									1								
Torup											1						
Torvala																	
Travenort																	
Trorod											1						
Tuboek Molle									1								
Tybrind Vig	U	1	U		2	U	>100		U			U	10				1
Ulkestrup						U			U								
Ulkestrup I									3								
Ulkestrup II									1			1					
Ulkestrup IV									1			1					
Ulslev			1														
Undlose Bro									24								
Undsted									1								
Urtiaga									1								
Vaalse Vig																	
Vaby									2								
Vadsted									1								
Vaenge So																	
Valle, Norway																	
Valle, Spain									8								
Vandlose									1								
Varanger				1													
Vasterbjers									U								
Vedbaek Henriksholm Bogebakken									U		U						
Vedbaek-Maglemosegard					2		U										
Vedbaek-Maglemosegards Vaenge					1?		1		U								
Vedbaek - Vaenget Nord																	
Vejby									1								
Vejle Lake									1								
Vejlebro							1										
Vente			1														
Verup Mose							1										
Vester Ulslev			1														
Vibygaard									1								
Viken Lake											1						
Villespy									1								

Table 6.3 (contd)

SITE	Arrows	Ballast Stone	Blubber Lamp	Gunwhale	Boat	Points (unspecified)	Simple Points	Bi-Points	Barbed Points	Barbed Point (rough out)	Slotted Points	Spear Shaft	Bow	Clubs	Fish Adornment	Floats	Floats (single hole - wood)
Villingebaek																	
Vinde-Helsing Mose							100		6								
Vinkel Mosse	1																
Vis I													31				
Visby									1								
Viste							70		3		12						
Vlasac							15	U	2					U			
Wachtfelsen									1								
Waltham									1								
Wandsworth									1								
Waren									1								
Wendhausen									1								
Wetzikon-Robenhausen					1												
Wichelen						1			1								
Willebroek									U								
Wilsleben									1								
Wisla																	
Ystad																	
Zalavonga																	
Zalavrug																	
Zalesie						1											
Zamostje II	U						U	U	U								
Zeje									4								
Zigeunerhohle									1								
Zvejnieki							2		1								
Zvidze	1						13		3								

Table 6.3 (contd)

SITE	Paddle	Net Weight	Net Spreader	Netting Needle	Mesh Design	Net Frames	Net	Moorings	Ice Pick	Line Weight	Lines (sinew)	Lines (bast)	Bone Hooks (blanks)	Bone Hooks (composite)	Bone Hooks (single piece)	Float Line (plant fibre)	Floats (pumice)	Floats (double hole - wood)	Floats (single hole bark)
Abri Cornville																			
Abri de Chinchon																			
Acy																			
Advik															5				
Aero															2				
Agernaes																			
Agerod Id																			
Agerod I:HC					1														
Agerod I-III					192														
Agerod V																			
Aggarps mosse																			
Aggersund															1				
Alby																			
Allersbog																			
Amrum																			
Antrea							1											17	
Appels																			
Arhus																			
Aveline's Hole																			
Backaskog																			
Ballyholme																			
Bare Mosse																			
Barleben																			
Barmose																			
Barnewitz																			
Barnow																			
Battersea																			
Bernaufels																			
Bethune																			
Birkemosse																			
Birsmatten																			
Bize, Petite Grotte																			
Bize, Grande Grotte																			
Bjeresjo																			
Bjornsholm															7	3			?U
Bloksbjerg															1				
Bogge II																			
Bornholm																			
Bothildenslunds																			
Brabrand																			
Brandenburg																			
Brandesburton																			
Brodersby																			
Bua Vastergard																			
Bussjo mosse																			
Calbe																			
Carstenminde																			
Casteal nan Gillea I																			
Castillo																			
Charlottenlund																			

Table 6.3 (contd)

SITE	Paddle	Net Weight	Net Spreader	Netting Needle	Mesh Design	Net Frames	Net	Moorings	Ice Pick	Line Weight	Lines (sinew)	Lines (bast)	Bone Hooks (blanks)	Bone Hooks (composite)	Bone Hooks (single piece)	Float Line (plant fibre)	Floats (punice)	Floats (double hole - wood)	Floats (single hole bark)
Climente																			
Cnoc Coig																			
Cnoc Sligeach																			
Copenhagen																			
Cranz																			
Crouzade																			
Cuina Turcului II					U														
Culoz																			
Cyclops Cave															60				
Dammen															1				
Davlekanovo																			
Deviete																			
Dietfurt																			
Djursnas																			
Dobbertin																			
Dohren																			
Druimvargie																			
Dyrholm															U				
Dummersee																			
Duvensee																			1
Earls Barton																			
Eckersdorf																			
El Pendo																			
Elbing																			
Ellemose																			
Ellerbek																			
Emmererfscheidenveen																			
Emmersboek																			
Ermithia																			
Ertebolle													U		5				
Esperods mosse																			
Europoort															2				
Evenhus																			
Faareveile																			
Falkensteinhohle																			
Fals Mosse																			
Faurelie II																			
Federsee																			
Felsstalle																			
Fernewerder															1				
Fienerode																			
Fjellenstrup																			
Flatow																			
Flynderhage																			
Folnhaus																			
Fohr																			
Forslev																			
Franchthi Cave																			
Friarton																			
Friesack							U											1	U
Froser Seelandereien																			

Table 6.3 (contd)

SITE	Paddle	Net Weight	Net Spreader	Netting Needle	Mesh Design	Net Frames	Net	Moorings	Ice Pick	Line Weight	Lines (sinew)	Lines (bast)	Bone Hooks (blanks)	Bone Hooks (composite)	Bone Hooks (single piece)	Float Line (plant fibre)	Floats (pumice)	Floats (double hole - wood)	Floats (single hole bark)
Funen Island				1															
Gasen													1						
Gislinge																			
Gniewino																			
Godsted																			
Gohra-Worle																			
Gourris																			
Gorlev																			
Goyet Cave																			
Grena																			
Gr-Steegan																			
Gressbakken										U				U					
Gronehelleren															4				
Gropbakkeengen																			
Grotte de Pegourie																			
Grotte des Harpons																			
Grotte Massat																			
Gudso Vig																			
Gusev																			
Haljarp					U														
Hallebygaard																			
Halsskov																			
Hamme																			
Hanger																			
Hardinxveld-Giessendam																			2
Hassing Osterkaer																			
Hastefjorden																			
Haubolle																			
Havelland															U				
Hemmor																			
Henauhof Nord II																			1
Henauhof Northwest Stratum 6																			
Henauhof Northwest Stratum 5																			
Henauhof Northwest Stratum 4																			
Henauhof Northwest Stratum 3																			
Herlufmagle																			
Hesselbjerggaard										1									
Heusden																			
Hinge So																			
Hirtzkirch-Seematt																			U
Hjembaek																			
Hoedic																			
Hofderup																			
Hohen Viecheln																			2?
Hoilandsvandet																			
Holmegaard I																			1
Holmegaard IV																			
Holmegaard V																			
Hook of Holland																			
Horninge Mosse																			
Horne																			

Table 6.3 (contd)

SITE	Floats (single hole bark)	Floats (double hole - wood)	Floats (punice)	Float Line (plant fibre)	Bone Hooks (single piece)	Bone Hooks (composite)	Bone Hooks (blanks)	Lines (bast)	Lines (sinew)	Line Weight	Ice Pick	Moorings	Net	Net Frames	Mesh Design	Netting Needle	Net Spreader	Net Weight	Paddle
Hornsea																			
Horsensfjord																			
Huseby Klev					U													1?	
Husum																			
Hylteberga mosse																			
Icoana															1				
Ingelstad																			
Inzigkofen																			
Isbergues																			
Istaby																			
Isturitz																			
Jagershohle																			
Jara Bank																1			
Jaravallen																			
Jonstorp																			
Jonstrup Vaenge																			
Jordlose Mose II																			
Kallingemose mosse															1	1			
Kalundborg															1		1?		
Kara-Koba																			
Karby																			
Kassemosse																			
Kents Cavern																			
Kildegaard																			
Kildegaard Ost																			
KI Machnow															1				
Klubba																			
Kolding Fjord															3	1?			
Kolind I					2		U			U								U	
Kongemose																			
Kongemosen V																			
Kongsted																			
Konnu																			
Kopu																			
Koster																			
Kosuchen																			
Krampkewitz																			
Kulm					U														
Kunda	U				16					70		U						U	
Kusserow																			
Kvernevika																			
La Haine																			
La Paloma																			
La Riera Azilian																			
La Tourasse																			
La Vache																			
Lachmirovica																			
Lake Lubana																			
Lammefjord																			
Langeland Island																			
Lango					1											1			

Table 6.3 (contd)

SITE	Paddle	Net Weight	Net Spreader	Netting Needle	Mesh Design	Net Frames	Net	Moorings	Ice Pick	Line Weight	Lines (sinew)	Lines (bast)	Bone Hooks (blanks)	Bone Hooks (composite)	Bone Hooks (single piece)	Float Line (plant fibre)	Floats (pumice)	Floats (double hole - wood)	Floats (single hole bark)
Lapsi VII																			
Lattmoor																			
Laugerie Basse																			
Lautereck																			
Le Trou Violet																			
Leiknes																			
Leman/Ower																			
Lepenski Vir		U			U														
Liesbergmuli 6																			
Lille Knabstrup																			
Lille Loshult																			
Lillebaelt																			
Limhamn				1?															
Lindholm I																			
Lippe																			
Lohusu																			
Lojesmolle																			
Longuerocche																			
Lorby																			
Lorthet																			
Los Azules I				1															
Lumentxa																			
Lundfors		U					U												
Lystrup I																			
MacArthurs Cave																			
Magdeburg																			
Magleo																			
Maisieres																			
Marietorp																			
Marievka																			
Marzenin																			
Mas D'Azil																			
Mazaculos																			
Mechelen																			
Mecklenburg																			
Meiendorf																			
Meilgard															1				
Melle																			
Mendrienen				1															
Menturren																			
Mitteldorf																			
Mjallby mosse																			
Moen																			
Mollegabet I																1			
Mollegabet II																			1?
Monster																			
Montfort																			
Morgi																			
Morin																			
Morke Enge																			

Table 6.3 (contd)

SITE	Floats (single hole bark)	Floats (double hole - wood)	Floats (punice)	Float Line (plant fibre)	Bone Hooks (single piece)	Bone Hooks (composite)	Bone Hooks (blanks)	Lines (bast)	Lines (sinew)	Line Weight	Ice Pick	Moorings	Net	Net Frames	Mesh Design	Netting Needle	Net Spreader	Net Weight	Paddle
Muldbjerg																			
Mullerup					U		1								1	1	1		
Multorp																			
Murzak-Koba																			
N f Lilleo																			
Naebbet																			
Narpes																			
Narva													U						
Nasbyholm																			
Nebbe Mosse																			
Nederst					10		U												
Nekselo																			
Neu Jucha																			
Neu Strelitz																			
Neught					U														
Newferry																			
Nidlose																			
Ninove																			
Nitki															1				
Nivagaard																			
Nizhnee Veret'e					U		1						U				U	1	
Nizhnee Veret'e I					5														
Noddekonge																			
Nolgarden																			
Nord de Bruxelles																			
Norrkopping																			
Norsminde																			
Novgorod																			
Nowa																			
Noyen-sur-Seine					U														
Nyelv Nedre Vest			1		17					1								14	
Obourg																			
Odense																1?			
Odmut																			
Odsherred																			
Offerdals																			
Ogaarde					5										2	1	1		
Oleni Ostrov																1			
Orebro																			
Ornskoldvik																			
Oslo																1			
Ossowo																			
Ostroleka															1				
Ostrovul Banului															U				
Ostrovul Mare																		1	
Oulu																			
Oxie																			
Padina I																		3	
Paris																			
Peitschendorf																			
Penken																			

Table 6.3 (contd)

SITE	Paddle	Net Weight	Net Spreader	Netting Needle	Mesh Design	Net Frames	Net	Moorings	Ice Pick	Line Weight	Lines (sinew)	Lines (bast)	Bone Hooks (blanks)	Bone Hooks (composite)	Bone Hooks (single piece)	Float Line (plant fibre)	Floats (punice)	Floats (double hole - wood)	Floats (single hole bark)
Pentekinnen																			
Pesse																			
Perkallen																			
Pernau									U						2				
Pilhagen																			
Pobiel 10																			
Pocas de Sao Bento																			
Pommeroeul																			
Pont D'Ambon																			
Porsemose																			
Porth-y-waen																			
Poulton-le-Flyde																			
Praestelyngen																			
Praesto																			
Priestermoor																			
Rabelovsjon																			
Raklev																			
Randers																			
Rascano																			
Reddies															1				
Reilhac																			
Rerslev																			
Retschwil-Stafligen II																			
Rheinbalm																			
Rhodes II																			
Ringkloster					1														1
Ringsjon																			
Ringsted																			
Risga															1				
Rochfort																			
Rodoy																			
Rogaland																			
Romsey					1														
Ronneholms mosse					U														
Rosenhof							U												
Rotterdam-Bergschenhoek																			
Rottjarnslid															15				
Royston																			
Rude II							U												1
Rugen																			
Ruskeneset																			
Ruthenie																			
Salies du Salat																			
Salitre																			
Sandhuse Mose																			
Sandlyng Skov																			
Satrup																			1 + 2?
Schela Cladovei																		1	
Schlussbeker Moor																			
Schotz																			
Schoonaerde																			

Table 6.3 (contd)

SITE	Paddle	Net Weight	Net Spreader	Netting Needle	Mesh Design	Net Frames	Net	Moorings	Ice Pick	Line Weight	Lines (sinew)	Lines (bast)	Bone Hooks (blanks)	Bone Hooks (composite)	Bone Hooks (single piece)	Float Line (plant fibre)	Floats (pumice)	Floats (double hole - wood)	Floats (single hole bark)
Seamer Carr																			
Segebro																			
Shewalton																			
Shigirskiy	4																		
Siedlung Forschner																			
Siggeneben Sud																			
Siivertsi		1							2			1						1	
Silkeborg So			1		1														
Siretorp																			
Sjalko																			
Sjodiken																			
Sjoholmen				2															
Skafteløv																			
Skalstrup				1															
Skane																			
Skateholm I																			
Skateholm II																			
Skellingsted Bro																			
Skellingsted Mose Nord																			
Skipsea																			
Skipshelleren				4?										120					
Skjavik																			
Skjoldnaes																			
Skottemarke																			
Skurups																			
Slagelseegen																			
Soborg Lake																			
Soborg So			2																
Soholm																			
Solager																			
Sonderholm													1						1
Sonderod																			
Sorbehen																			
Sproughton I																			
Sproughton II																			
Stammebad																			1
Star Carr																			1
Stellmoor																			
Stensballe Sund																			1
Stokkeborg																			
Stora Bjers																			
Stora Dode mosse																			
Stora Forvar-Stora Karlso																			
Store Vildmose																			
Strand																			
Strandegaard																			
Stryno Basin														2					
Svaerdborg I														U					
Svaerdborg I-Pre-Excavation Collection					1														
Svaerdborg II																			

Table 6.3 (contd)

SITE	Paddle	Net Weight	Net Spreader	Netting Needle	Mesh Design	Net Frames	Net	Moorings	Ice Pick	Line Weight	Lines (sinew)	Lines (bast)	Bone Hooks (blanks)	Bone Hooks (composite)	Bone Hooks (single piece)	Float Line (plant fibre)	Floats (pumice)	Floats (double hole - wood)	Floats (single hole bark)
Svedstrup																			
Sventoji																			
Svinninge Veijle																			
Szircuponen																			
Taaderup																			
Tange																			
Tannstock																			
Tarvastu																			
Teviec																			
Thatcham		12?													1?				
Tingbjerggaard																			
Tisso																			
Tjorn																			
Tlokowo																			
Torning																			
Torup																			
Torvala																			
Travenort				1	1														
Trorod																			
Tubeek Molle																			
Tybrind Vig								1	U						10-20				
Ulkestrup								1											
Ulkestrup I																			
Ulkestrup II																			
Ulkestrup IV																			
Ulslev																			
Undlose Bro				1															
Undsted																			
Urtiaga																			
Vaalse Vig				2															
Vaby																			
Vadsted																			
Vaenge So																		U	
Valle, Norway																			
Valle, Spain																			
Vandlose																			
Varanger																			
Vasterbjers																			
Vedbaek Henriksholm Bogebakken																			
Vedbaek-Maglelosegard														5					
Vedbaek-Maglelosegards Vaenge																			1
Vedbaek - Vaenget Nord																			
Vejby																			
Vejle Lake																			
Vejlebro																			
Vente																			
Verup Mose																			
Vester Ulslev																			
Vibygaard																			
Viken Lake																			
Villespy																			

Table 6.3 (contd)

	Paddle	Net Weight	Net Spreader	Netting Needle	Mesh Design	Net Frames	Net	Moorings	Ice Pick	Line Weight	Lines (sinew)	Lines (bast)	Bone Hooks (blanks)	Bone Hooks (composite)	Bone Hooks (single piece)	Float Line (plant fibre)	Floats (pumice)	Floats (double hole - wood)	Floats (single hole bark)
SITE																			
Villingebaek																			
Vinde-Helsing Mose			1												5				
Vinkel Mosse																			
Vis I						8	1											1	
Visby																			
Viste															29				
Vlasac					4														
Wachtfelsen																			
Waltham																			
Wandsworth																			
Waren																			
Wendhausen																			
Wetzikon-Robenhausen							U												
Wichelen																			
Willebroek																			
Wilsleben																			
Wisla															1				
Ystad					1														
Zalavonga																			
Zalavrug																			
Zalesie																			
Zamostje II															U				
Zeke																			
Zigeunerhohle																			
Zvejnieki																			
Zvidze																			

Table 6.3 (contd)

Table 6.3 (contd)

SITE	Pulse	Rock Engraving (halibut)	Rock Engraving (skin boat)	Slate Knives	Slate Points	Weir	Weir (fence)	Trap	Worked Spurdog Spine	Fish Tooth Pendant
Climente										
Cnoc Coig										
Cnoc Sligeach										
Copenhagen										
Cranz										
Crouzade										
Cuina Turcului II										
Culoz										
Cyclops Cave										
Dammen										
Davlekanovo										
Deviete										
Dietfurt										U
Djursnas										
Dobbertin										
Dohren										
Druimvargie										
Dyrholm										
Dummersee										
Duvensee										
Earls Barton										
Eckersdorf										
El Pendo										
Elbing										
Ellemose										
Ellerbek										
Emmererfscheidenveen										
Emmersboek										
Ermitia										
Ertebolle										
Esperods mosse										
Europoort										
Evenhus		1								
Faareveile										
Falkensteinhöhle										
Fals Mosse										
Faurelie II										
Federsee										
Felsstalle										
Fernewerder										
Fienerode										
Fjellenstrup								2		
Flatow										
Flynderhage										
Folenhaus										U
Fohr										
Forslev		1								
Franchthi Cave										
Friarton										
Friesack										
Froser Seelandereien										

Table 6.3 (contd)

SITE	Pulse	Rock Engraving (halibut)	Rock Engraving (skin boat)	Slate Knives	Slate Points	Weir	Weir (fence)	Trap	Worked Spurdog Spine	Fish Tooth Pendant
Funen Island										
Gasen										
Gislinge										
Gniewino										
Godsted										
Gohra-Worle										
Gourris										
Gorlev										
Goyet Cave										
Grena										
Gr-Steegan										
Gressbakken				U						
Gronehelleren										
Gropbakkeengen				1						
Grotte de Pegourie										
Grotte des Harpons										
Grotte Massat										
Gudso Vig										
Gusev										
Haljarp								1		
Hallebygaard										
Halsskov						1	2			
Hamme										
Hanger										
Hardinxveld-Giessendam										
Hassing Osterkaer										
Hastefjorden										
Haubolle										
Havelland	1									
Hemmor										
Henauhof Nord II										
Henauhof Nordwest Stratum 6										
Henauhof Nordwest Stratum 5										
Henauhof Nordwest Stratum 4										
Henauhof Nordwest Stratum 3										
Herlufmagle										
Hesselbjerggaard										
Heusden										
Hinge So										
Hirtzkirch-Seematt										
Hjembaek										
Hoedic										
Hofderup										
Hohen Viecheln										
Hoilandsvandet										
Holmegaard I										
Holmegaard IV										
Holmegaard V										
Hook of Holland										
Horninge Mosse										
Horne										

Table 6.3 (contd)

SITE	Pulse	Rock Engraving (thalibut)	Rock Engraving (skin boat)	Slate Knives	Slate Points	Weir	Weir (fence)	Trap	Worked Spurdog Spine	Fish Tooth Pendant
Hornsea										
Horsensfjord										
Huseby Klev										
Husum										
Hylteberga mosse										
Icoana										
Ingelstad										
Inzigkofen										
Isbergues										
Istaby										
Isturitz										
Jagersshohle										
Jara Bank										
Jaravallen										
Jonstorp								1		
Jonstrup Vaenge										
Jordlose Mose II										
Kallingemore mosse										
Kalundborg										
Kara-Koba										
Karby										
Kassemosse										
Kents Cavern										
Kildegaard										
Kildegaard Ost										
KI Machnow										
Klubba										
Kolding Fjord										
Kolind I										
Kongemose										
Kongemosen V										
Kongsted										
Konnu										
Kopu										
Koster								1		
Kosuchen										
Krampkewitz										
Kulm										
Kunda										
Kusserow										
Kvernevika	1									
La Haine										
La Paloma										
La Riera Azilian										
La Tourasse										
La Vache										
Lachmirovice										
Lake Lubana										
Lammefjord							1?			
Langeland Island										
Lango										

Table 6.3 (contd)

SITE	Pulse	Rock Engraving (halibut)	Rock Engraving (skin boat)	Slate Knives	Slate Points	Weir	Weir (fence)	Trap	Worked Spurdog Spine	Fish Tooth Pendant
Lapsi VII										
Lattmoor										
Laugerie Basse										
Lautereck										
Le Trou Violet										
Leiknes										
Leman/Ower										
Lepenski Vir										
Liesbergmuli 6										
Lille Knabstrup								2 + 5-6		
Lille Loshult										
Lillebaelt										
Limhamn										
Lindholm I						U				
Lippe										
Lohusu										
Lojesmolle										
Longuerocche										
Lorby										
Lorthet										
Los Azules I										
Lumentxa										
Lundfors				U						
Lystrup I										
MacArthurs Cave										
Magdeburg										
Magleo										
Maisieres										
Marietorp										
Marievka										U
Marzenin										
Mas D'Azil										
Mazaculos										
Mechelen										
Mecklenburg										
Meiendorf										
Meilgard										
Melle										
Mendrienen										
Menturren										
Mitteldorf										
Mjallby mosse										
Moen										
Mollegabet I							U			
Mollegabet II							1+1?			
Monster										
Montfort										
Morgi										
Morin										
Morke Enge										

Table 6.3 (contd)

SITE	Pulse	Rock Engraving (halibut)	Rock Engraving (skin boat)	Slate Knives	Slate Points	Weir	Weir (fence)	Trap	Worked Spurdog Spine	Fish Tooth Pendant
Muldbjerg										
Mullerup										
Multorp										
Murzak-Koba										
N f Lilleo										
Naebbet										
Narpes										
Narva										
Nasbyholm	1									
Nebbe Mosse								1		
Nederst										
Nekselo							1			
Neu Jucha										
Neu Strelitz										
Neught										
Newferry										
Nidlose								1		
Ninove										
Nitki										
Nivagaard										
Nizhnee Veret'e	?U									
Nizhnee Veret'e I										
Noddekonge								1		
Nolgarden										
Nord de Bruxelles										
Norrkopping										
Norsminde										
Novgorod	1?									
Nowa										
Noyen-sur-Seine								1		
Nyelv Nedre Vest				3	6					
Obourg										
Odense										
Odmut										
Odsherred										
Offerdals										
Ogaarde										
Oleni Ostrov				U						
Orebro										
Ornskoldvik										
Oslo										
Ossowo										
Ostroleka										
Ostrovul Banului										
Ostrovul Mare										
Oulu										
Oxie										
Padina I										
Paris										
Peitschendorf										
Penken										

Table 6.3 (contd)

SITE	Pulse	Rock Engraving (halibut)	Rock Engraving (skin boat)	Slate Knives	Slate Points	Weir	Weir (fence)	Trap	Worked Spurdog Spine	Fish Tooth Pendant
Pentekinnen										
Pesse										
Perkallen										
Pernau										
Pilhagen						U?				
Pobiel 10										
Pocas de Sao Bento				U						
Pommeroeul										
Pont D'Ambon										
Porsemose										
Porth-y-waen										
Poulton-le-Flyde										
Praestelyngen									1	
Praesto										
Priestermoor								1		
Rabelovsjon										
Raklev										
Randers										
Rascano										
Reddies										
Reilhac										
Rerslev										
Retschwil-Stafligen II										
Rheinbalm										
Rhodes II										
Ringkloster							1?			
Ringsjon										
Ringsted										
Risga										
Rochfort										
Rodoy			1							
Rogaland										
Romsey										
Ronneholms mosse										
Rosenhof										
Rotterdam-Bergschenhoek								4		
Rottjarnslid										
Royston										
Rude II										
Rugen										
Ruskenesset										
Ruthenie										
Salies du Salat										
Salitre										
Sandhuse Mose										
Sandlyng Skov										
Satrup	1									
Schela Cladovei										
Schlussbeker Moor								3		
Schotz										
Schoonaerde										

Table 6.3 (contd)

SITE	Pulse	Rock Engraving (halibut)	Rock Engraving (skin boat)	Slate Knives	Slate Points	Weir	Weir (fence)	Trap	Worked Spurdog Spine	Fish Tooth Pendant
Seamer Carr										
Segebro										
Shewalton										
Shigirskiy										
Siedlung Forschner										
Siggeneben Sud										
Siivertsi										
Silkeborg So										
Siretop										
Sjalko										
Sjodiken	1									
Sjoholmen										
Skafteløv										
Skalstrup										
Skane										
Skateholm I										
Skateholm II										
Skellingsted Bro										
Skellingsted Mose Nord										
Skipsea										
Skipshelleren										
Skjavik										
Skjoldnaes										
Skottemarke										
Skurups										
Slagelseegen										
Soborg Lake							1			
Soborg So										
Soholm										
Solager										
Sonderholm										
Sonderod										
Sorbehen										
Sproughton I										
Sproughton II										
Stammebad										
Star Carr										
Stellmoor										
Stensballe Sund										
Stokkeborg										
Stora Bjers										
Stora Dode mosse										
Stora Forvar-Stora Karlso										
Store Vildmose										
Strand										
Strandegaard										
Stryno Basin										
Svaerdborg I										
Svaerdborg I-Pre-Excavation Collection										
Svaerdborg II										

Table 6.3 (contd)

SITE	Pulse	Rock Engraving (halibut)	Rock Engraving (skin boat)	Slate Knives	Slate Points	Weir	Weir (fence)	Trap	Worked Spurdog Spine	Fish Tooth Pendant
Svedstrup										
Sventoji										
Svinninge Veijle								1		
Szirguponen										
Taaderup										
Tange										
Tannstock										
Tarvastu										
Teviec										
Thatcham						1				
Tingbjerggaard										
Tisso										
Tjorn										
Tlokowo										
Torning										
Torup										
Torvala	1?									
Travenort										
Trorod										
Tuboek Molle										
Tybrind Vig							1	1		
Ulkestrup										
Ulkestrup I										
Ulkestrup II										
Ulkestrup IV										
Ulslev										
Undlose Bro										
Undsted										
Urtiaga										
Vaalse Vig										
Vaby										
Vadsted										
Vaenge So										
Valle, Norway		1								
Valle, Spain										
Vandlose										
Varanger										
Vasterbjers										
Vedbaek Henriksholm Bogebakken										
Vedbaek-Maglelosegard								1		
Vedbaek-Maglelosegards Vaenge								2or3		
Vedbaek - Vaenget Nord						1				
Vejby										
Vejle Lake										
Vejlebro										
Vente										
Verup Mose										
Vester Ulslev										
Vibygaard										
Viken Lake										
Villespy										

Table 6.3 (contd)

	Fish Tooth Pendant	Worked Spurdog Spine	Trap	Weir (fence)	Weir	Slate Points	Slate Knives	Rock Engraving (skin boat)	Rock Engraving (halibut)	Pulse	SITE
			1								Villingebaek
											Vinde-Helsing Mose
											Vinkel Mosse
			?1							1?	Vis I
											Visby
											Viste
											Vlasac
											Wachtfelsen
											Waltham
											Wandsworth
											Waren
											Wendhausen
											Wetzikon-Robenhausen
											Wichelen
											Willebroek
											Wilsleben
											Wisla
											Ystad
								1			Zalavonga
											Zalavuga
											Zalesie
			2	1							Zamostje II
											Zeje
											Zigeunerhohle
											Zvejnieki
				1*							Zvidze

^ - boat burial
U - number of finds unspecified

Table 6.4 - Database of Projectile Points

Table 6.4a Finds of Organic Points

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Abri Cornille			1							
Abri de Chinchon						1				
Acy		1								
Advik					2					
Advik										
Aero	U				2					
Agerod ID			1							
Agerod ID									1	
Agerod ID					1					
Agerod I:HC	58									
Agerod I:HC					4					
Agerod I:HC					1					
Agerod I:HC					1					
Agerod I:HC				U (incl 58)						
Agerod I:HC									33	
Agerod I:HC										
Agerod I:HC										
Agerod I:HC										
Agerod I:HC										
Agerod V					8					
Agerod V										
Aggarps mosse					3					
Aggarps mosse										
Aggersund			1							
Alby					1					
Alby									U	
Amrum		1								
Appels									U	
Arhus									2	
Aveline's Hole		1								
Backaskog			1						1	
Ballyholme			1							
Barmose		1								
Barnewitz		1								
Barnow		1								
Battersea					1					
Bernaufels						1				
Bethune					3					
Bethune										
Birkemose		1								
Birsmatten									2	
Birsmatten			6							
Birsmatten						3				
Birsmatten										
Birsmatten										

Table 6.4a (contd)

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Bize, Petite Grotte			2							
Bize, Petite Grotte									1	
Bize, Grande Grotte									U	
Bjeresjo		1								
Bjornsholm			21							
Bloksbjerg		1							U	7
Bloksbjerg			23							
Bloksbjerg										
Bloksbjerg										
Bloksbjerg										
Bloksbjerg										
Bloksbjerg				1						
Bloksbjerg					1					
Bloksbjerg						1				
Bohuslan										U
Bornholm		2								
Bornholm							1			
Bothildenslund					1					
Brabrand					16					
Brandenburg		U								U
Brandesburton					6					
Brandesburton										
Brandesburton										
Brandesburton										
Brandesburton										
Brodersby		1								
Bua Vastergard		U								
Bussjo Mosse										1
Calbe					1					
Carstenminde		1								3
Casteal nan Gilleaen I		8	U							
Casteal nan Gilleaen I							3			
Castillo									1	
Charlottenlund		1								
Climente I			1							
Climente II					1					
Cnoc Coig			4							
Cnoc Sligeach							3			
Copenhagen										1
Cranz			1							
Crouzade			U							
Culoz		U								
Davlekanovo		2								
Deviete							1			
Djurnas						1				
Dobbertin			2							
Dobbertin					2					

Table 6.4a (contd)

Table 6.4a (contd)

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Gorlev		3								
Gourris		2							2	
Grena		1								
Gr-Steegan		1								
Gressbakken					1					
Gronehelleren									1	1
Gropbakkeengen	2									
Grotte de Pegourie					1					
Grotte de Pegourie						2				
Grotte de Pegourie										
Grotte des Harpons		U			4					
Grotte Massat		U								
Gudso Vig		U								
Gudso Vig					1					
Gudso Vig					1					
Gusev			1							
Hallebygaard			1							
Hamme		U								
Hanger					1					
Hassing Osterkaer		1								
Hastefjorden					1					
Haubolle		1								
Havelland		U	U							U
Havelland										
Havelland										
Havelland										
Havelland										
Havelland										
Havelland										
Havelland										
Havelland										
Hemmor									1	
Henauhof Northwest Stratum 6			1							
Henauhof Northwest Stratum 5			1							
Henauhof Northwest Stratum 4			119							
Henauhof Northwest Stratum 3			49	1						
Herlufmagle					7					
Heusden		1								
Hinge So		1								
Hirtzkirch-Seematt	U								1	
Hjembaek										1
Hoedic			5							
Hoedic										
Hoedic										
Hoedic										
Hofderup									1	
Hohen Viecheln	25		33							1

Table 6.4a (contd)

Table 6.4a (contd)

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Istaby										
Istaby					1					
Isturitz		U							5	
Isturitz				1						
Jagershohle		1	U							
Jonstrup Vaenge		1								
Jordlose Mose II					2					
Kallingemore Mosse		1								
Kara Koba									U	
Karby		2								
Kassemosse										2
Kents Cavern		3								
Kildegaard			1							
Kildegaard Ost		2	7							
Koldingfjord		1								
Koldingfjord			1							
Kongemosen										1
Kongsted					6					
Kongsted										
Konnu									U	
Kopu									U	
Koster									1	
Kosuchen										1
Krampkewitz		1								
Kunda				U						
Kunda					4					
Kunda										
Kunda										
Kunda										
Kunda							1			
Kunda							2			
Kunda										1
Kusserow			2							
La Haine										1
La Paloma									2	
La Riera			1?							
La Riera						1				
La Tourasse	11									
La Tourasse							3			
La Tourasse										
La Tourasse						2				
La Tourasse										
La Vache									2	
La Vache						1				
La Vache							1			
Lachmirowice					1					
Lake Lubana							4			
Langeland Island										1

Table 6.4a (contd)

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserual perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Lango			1							
Lango		1								
Lapsi VII									1	
Lattmoor		1								
Laugerie Basse		2							6	
Lautereck			3							
Le Trou Violet						1				
Le Trou Violet			5							
Le Trou Violet										
Le Trou Violet										
Le Trou Violet										
Le Trou Violet										
Leman-Ower					1					
Lepenski Vir			2							
Lepenski Vir										
Liesbergmuli 6						5				
Liesbergmuli 7										
Liesbergmuli 8										
Liesbergmuli 9										
Liesbergmuli 10										
Lille Baelt					1					
Lippe		1								
Lohusu		3								
Lojesmolle		5	3						2	
Lojesmolle					4					
Lojesmolle										
Lojesmolle										
Longueroche									2	
Lorby		1								
Lorthet	24								1	
Los Azules I			U							
Los Azules I						19				
Los Azules I										
Los Azules I										
Lumentxa									1	
MacArthur's Cave			2							
MacArthur's Cave						2				
MacArthur's Cave										
MacArthur's Cave							1			
Magleo					1					
Magleo			6							
Masieres		1								
Marietorp							1			
Marzenin			1							
Mas d'Azil		93								
Mas d'Azil					4					
Mas d'Azil										
Mas d'Azil										

Table 6.4a (contd)

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Mas d'Azil										
Mas d'Azil							20			
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mas d'Azil										
Mazaculos				U						
Mechelen		U								
Mecklenburg		U		U						
Meiendorf			U							
Meiendorf										
Meiendorf										
Meiendorf										
Meiendorf										
Meiendorf				U						
Meiendorf		U								
Melle		2								
Menturren										1
Mitteldorf			1							
Mjallby Mosse		1								
Moen								2		
Mollegabet I			U		20					
Mollegabet II			U		U					
Mollegabet II										
Mollegabet II										
Monster					3					
Monster										
Monster										
Montfort		1						1		
Morgi					1					
Morin								1		
Morke Enge		20								
Mullerup		72	U							1

Table 6.4a (contd)

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Multorp										1
Murzak-Koba		1							U	
N f Lilleo		3								
Naebbet					2					
Narpes		1								
Neu Jucha		1								
Neu Strelitz		1								
Newferry			3							
Newferry										
Newferry										
Ninove										1
Nivagaard										4-5
Nizhnee Veret'e	68	U	U							
Nizhnee Veret'e										
Nizhnee Veret'e										
Nizhnee Veret'e I		U								
Nizhnee Veret'e I			3							
Nizhnee Veret'e I										
Nizhnee Veret'e I										
Nolgarden						1				
Nord de Bruxelles					1					
Norrkopping									1	
Norsminde			U							
Nowa				2						
Nowa					1					
Nowa			1							
Nyelv Nedre Vest			6							
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest					8					
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest										
Nyelv Nedre Vest						1				
Nyelv Nedre Vest										1
Obourg										1
Odense		1								
Odmut						56				
Odmut										
Odmut										
Odmut										

Table 6.4a (contd)

Table 6.4a (contd)

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Ostroleka		1								
Ostovul Mare			10	1						
Oulu		1								
Oxie		1								
Padina I	U									
Padina I			6							
Padina I										
Padina I										
Padina I				1						
Paris		1								
Peitschendorf		1								
Penken		1								
Petenkinnen						1				
Perkallen										1
Pernau					5					
Pernau										
Pernau										
Pernau										
Pernau										1
Pernau						1				
Pobiel 10	1									
Pobiel 11			U							
Pocas de Sao Bento	U									
Pommeroeul		1								
Pont D'Ambon			U							
Pont D'Ambon							1			
Porsemose		1								
Porth-y-waen					1					
Poulton-le-Flyde					2					
Poulton-le-Flyde										
Praesto									1	
Rabelovsjon						1				
Rabelovsjon										1
Rabelovsjon					3					
Rabelovsjon										
Rabelovsjon										
Raklev										1
Randers									1	1
Rascano									2	
Reilhac		5								
Reilhac						2				
Reilhac										
Rerslev		6								
Rheinbalm							2			
Rheinbalm										
Rhodes II		U								
Rhodes II							1			
Rhodes II							1			

Table 6.4a (contd)

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Ringkloster			14							
Ringkloster										
Ringkloster										
Ringkloster										
Ringkloster										
Ringsjon		1								
Ringsted			1							
Risga			2		1					
Rochfort		1								
Rogaland		1								U
Romsey		1								
Ronneholms Mosse		1								
Rosenhof					U					
Rottjarnslid										3
Rottjarnslid								1		
Royston					1					
Rude II					U					
Rugen		1								
Ruthenie									1	
Salies du Salat									1	
Salitre									1	
Sandhuse Mose			1							
Sandhuse Mose										
Sandhuse Mose										
Sandlyng Skov		U								
Satrup			1							
Schela Cladovei			20							
Schotz							1			
Schoonaerde		1								
Seamer Carr										1
Segebro	U		1							
Segebro					1					
Shewalton							1			
Siedlung Forschner			1							
Sigenenben Sud					U					
Siiversti		U	1							
Siiversti					U					
Siretorp					2					
Siretorp										
Sjalko		1								
Sjoholmen		7								
Sjoholmen										
Sjoholmen										
Sjoholmen										
Sjoholmen										
Sjoholmen										48
Sjoholmen										
Sjoholmen			58							
Sjoholmen										

Table 6.4a (contd)

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Sjoholmen										
Sjoholmen										
Skafteløv						1				
Skane										1
Skane					1					
Skateholm I									1	
Skellingsted Bro					14					
Skellingsted Bro										
Skellingsted Bro										
Skellingsted Bro										7
Skellingsted Bro										
Skellingsted Mose Nord		4	4							1
Skipsea					1					
Skipshelleren		18	25						U	12
Skjavik									U	
Skjoldnaes					2					
Skottemarke		14								
Skurups					1					
Slagelseegen		2								
Soborg So			2							1
Soholm										1
Solager									U	
Sonderod		4	2							
Sorbehen		1								
Sproughton I					1					
Sproughton II					1					
Star Carr		190				1				
Stellmoor		U								
Stellmoor					2					
Stellmoor						2				
Stellmoor										
Stokkeborg										1
Stora Bjers										1
Stora Dode Mosse										2
Stora Forvar-Stora Kariso									15	U
Store Vildmose		1								
Stryno Basin			102							
Svaerdborg I	89	75								2
Svaerdborg I					15					
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										

Table 6.4a (contd)

Site	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										
Svaerdborg I			15							
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										
Svaerdborg I										3
Svaerdborg I										
Svaerdborg I		15	6							1
Svaerdborg II		32								
Svedstrup		3								
Sventoji		U								
Svinninge Veijle								1		
Szirgponen					1					
Szirgponen						1				
Taaderup		1								
Tange		1								
Tannstock			1							
Tarvastu										1
Teviec			16							
Teviec				6						
Teviec										
Teviec										
Thatcham	3	3		1						
Thatcham			8							
Thatcham										
Thatcham										
Thatcham										
Thatcham										
Thatcham										
Thatcham										
Tingbjerggaard			1							
Tisso		1								
Tjorn										1
Tlokowo										1
Torning		1								
Torup										1
Trorod										1
Tuboek Molle						1				
Tybrind Vig	U		>100		U					U
Tybrind Vig			2							
Tybrind Vig										

Table 6.4a (contd)

Table 6.4a (contd)

	SITE TOTAL									
	Points (unspecified)	Barbed (unspecified)	Simple	Bi-point	Barbed (uniserial)	Barbed (uniserial perforated)	Barbed (biserial perforated)	Barbed (base)	Barbed (perf unspecified)	Slotted
Site										
Zalesie	1									
Zamostje II		U	U	U						
Zelev		4								
Zigeunhohle					1					
Zvejnieki			1							
Zvejnieki							1			
Zvejnieki					1					
Zvejnieki					U					
Zvidze							3			
Zvidze					2					
Zvidze							5			
Zvidze										
Zvidze			10							
Zvidze			1							
Zvidze			1							
Zvidze			1							

Table 6.4b - Dimension and Form of Organic Points

	SPECIFIC EXAMPLES												

Table 6.4b (contd)

	SPECIFIC EXAMPLES												
Site	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)	Bi-point
Bethune	39	1						6					
Bethune	40	1											
Birkemose	41												
Birsmatten	42												
Birsmatten	43										1		
Birsmatten	44					1							
Birsmatten	45					1		4					
Birsmatten	46					1							
Bize, Petite Grotte	47											1	
Bize, Petite Grotte	48			1				3					
Bize, Grande Grotte	49												
Bjeresjö	50												
Bjornsholm	51												
Bloksbjerg	52												
Bloksbjerg	53										1		
Bloksbjerg	54											1	
Bloksbjerg	55											1	
Bloksbjerg	56											1	
Bloksbjerg	57											1	
Bloksbjerg	58											1	
Bloksbjerg	59												1
Bloksbjerg	60	1											
Bloksbjerg	61					1							
Bohuslan	62												
Bornholm	63												
Bornholm	64					1		10					
Bothildenslund	65	1											
Brabrand	66	16											
Brandenburg	67												
Brandesburton	68	1											
Brandesburton	69	1											
Brandesburton	70	1											
Brandesburton	71	1											
Brandesburton	72	1											
Brandesburton	73	1											
Brodersby	74												
Bua Vastergard	75												

Table 6.4b (contd)

	SPECIFIC EXAMPLES												
	Specimen No.	Barbed (uniserial)	Barbed (perf unispec)	Barbed (uniseriial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)	Bi-point
Site													
Bussjo Mosse	76								1	7			
Calbe	77	1											
Carstenminde	78												
Casteal nan Gillean I	79												
Casteal nan Gillean I	80					3							
Castillo	81												
Charlottenlund	82												
Climente I	83										1		
Climente II	84	1						1					
Cnoc Coig	85										4		
Cnoc Sligeach	86					3							
Copenhagen	87												
Cranz	88												
Crouzade	89										1		
Culoz	90												
Davlekanovo	91												
Deviete	92					1							
Djursnas	93			1				4					
Dobbertin	94												
Dobbertin	95	1											
Dobbertin	96	1						1					
Dohren	97												
Druimvargie	98	1											
Dummersee	99												
Duvensee	100												
Duvensee	101	1											
Duvensee	102	1											
Dyrholm	103	U											
Earls Barton	104												
Eckersdorf	105												
El Pendo	106												
Elbing	107												
Ellemose	108												
Ellerbek	109					1		2					
Emmererfscheidenveen	110	1											
Emmersbaek	111	5											
Ermithia	112												

Table 6.4b (contd)

	SPECIFIC EXAMPLES												

Table 6.4b (contd)

Site	SPECIFIC EXAMPLES												
	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)	Bi-point
Gronehelleren	150												
Gropbakkeengen	151												
Grotte de Pegourie	152	1											
Grotte de Pegourie	153					1							
Grotte de Pegourie	154					1							
Grotte des Harpons	155												
Grotte Massat	156												
Gudso Vig	157	1											
Gudso Vig	158	1						1					
Gudso Vig	159	1						3					
Gusev	160												
Hallebygaard	161												
Hamme	162												
Hanger	163	1						12					
Hassing Osterkaer	164												
Hastefjorden	165	1						4					
Haubolle	166												
Havelland	167												
Havelland	168	U											
Havelland	169					U							
Havelland	170	U											
Havelland	171	U											
Havelland	172	U											
Havelland	173					U							
Havelland	174										U		
Havelland	175	U											
Havelland	176	U											
Hemmor	177												
Henauhof Northwest Stratum 6	178												
Henauhof Northwest Stratum 5	179												
Henauhof Northwest Stratum 4	180												
Henauhof Northwest Stratum 3	181												
Herlufmagle	182												
Heusden	183												
Hinge So	184												
Hirtzkirch-Seematt	185		1										
Hjembaek	186								1				

Table 6.4b (contd)

	SPECIFIC EXAMPLES												
	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)	Bi-point
Site													
Hoedic	187											1	
Hoedic	188											1	
Hoedic	189											1	
Hoedic	190										1		
Hoedic	191										1		
Hofderup	192												
Hohen Viecheln	193										10		
Hohen Viecheln	194										23		
Hohen Viecheln	195	95											
Hohen Viecheln	196	6											
Hohen Viecheln	197	12											
Hohen Viecheln	198	132											
Hohen Viecheln	199	17											
Hohen Viecheln	200	1											
Hohen Viecheln	201	4											
Hohen Viecheln	202												
Hohen Viecheln	203												
Hohen Viecheln	204												
Hohen Viecheln	205												
Hohen Viecheln	206												
Hoilandsvandet	207												
Holmegaard I	208										17		
Holmegaard I	209										1		
Holmegaard I	210	1						1					
Holmegaard I	211	11						1					
Holmegaard I	212	9						2					
Holmegaard I	213	1						2					
Holmegaard I	214	6						3					
Holmegaard I	215	2						3					
Holmegaard I	216	2						4					
Holmegaard I	217	3						4					
Holmegaard I	218	2						5					
Holmegaard I	219	14					uncertain						
Holmegaard I	220										2		
Holmegaard I	221										1		
Holmegaard I	222										1		
Holmegaard IV	223								1	0			
Holmegaard IV	224										1		

Table 6.4b (contd)

Site	SPECIFIC EXAMPLES										
	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points
Holmegaard IV	225										1
Holmegaard IV	226										1
Holmegaard IV	227										1
Holmegaard IV	228										1
Holmegaard V	229										
Hook of Holland	230										
Horninge Mosse	231										
Horninge Mosse	232	1									
Horninge Mosse	233	1									
Horne	234										
Hornsea	235	1									
Horsensfjord	236					1		2			
Hylteberga Mosse	237								1		
Icoana	238										
Ingelstad	239	1									
Inzigkofen	240										
Isbergues	241										
Istaby	242										
Istaby	243					1					
Istaby	244	1									
Isturitz	245										
Isturitz	246										1
Jagersshohle	247										
Jonstrup Vaenge	248										
Jordlose Mose II	249	2									
Kallingemore Mosse	250										
Kara Koba	251		U								
Karby	252										
Kassemosse	253										
Kents Cavern	254										
Kildegaard	255										1
Kildegaard Ost	256										
Koldingfjord	257										
Koldingfjord	258										1
Kongemosen	259								1	2	
Kongsted	260	1									
Kongsted	261	5									
Konnu	262										

Table 6.4b (contd)

Site	SPECIFIC EXAMPLES											
	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)
Kopu	263											
Koster	264											
Kosuchen	265											
Krampkewitz	266											
Kunda	267											
Kunda	268	1						8				
Kunda	269	1										
Kunda	270	1										
Kunda	271	1						1				
Kunda	272				1			5				
Kunda	273					1		2				
Kunda	274					1						
Kunda	275								1			
Kusserow	276											
La Haine	277											
La Paloma	278											
La Riera	279											
La Riera	280			1								
La Tourasse	281											
La Tourasse	282				1			5				
La Tourasse	283				1			5				
La Tourasse	284			1				2				
La Tourasse	285			1				2				
La Vache	286											
La Vache	287	1						2				
La Vache	288				1			4				
Lachmirowice	289	1						5				
Lake Lubana	290											
Langeland Island	291											
Lango	292										1	
Lango	293											
Lapsi VII	294		1									
Lattmoor	295											
Laugerie Basse	296											
Lautereck	297											
Le Trou Violet	298					1						
Le Trou Violet	299										1	
Le Trou Violet	300										1	

Table 6.4b (contd)

	SPECIFIC EXAMPLES												
	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)	Bi-point
Site													
Le Trou Violet	301										1		
Le Trou Violet	302										1		
Le Trou Violet	303										1		
Leman-Ower	304	1											
Lepenski Vir	305										1		
Lepenski Vir	306										1		
Liesbergmuli 6	307					1		7					
Liesbergmuli 7	308					1							
Liesbergmuli 8	309					1		7					
Liesbergmuli 9	310					1							
Liesbergmuli 10	311					1							
Lille Baelt	312					1							
Lippe	313												
Lohusu	314												
Lojesmolle	315												
Lojesmolle	316	1						1					
Lojesmolle	317	1						3					
Lojesmolle	318	1						3					
Lojesmolle	319	1											
Longueroc	320												
Lorby	321												
Lorthet	322												
Los Azules I	323												
Los Azules I	324			1				3					
Los Azules I	325			1				1					
Los Azules I	326			1				4					
Lumentxa	327												
MacArthur's Cave	328												
MacArthur's Cave	329					1							
MacArthur's Cave	330					1		8					
MacArthur's Cave	331				1			8					
Magleo	332	1						2					
Magleo	333										6		
Masieres	334												
Marietorp	335					1							
Marzenin	336										1		
Mas d'Azil	337												
Mas d'Azil	338			1				7					

Table 6.4b (contd)

	SPECIFIC EXAMPLES												
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Table 6.4b (contd)

Site	SPECIFIC EXAMPLES												
	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)	Bi-point
Mollegabet I	377	20											
Mollegabet II	378			1									
Mollegabet II	379	1											
Mollegabet II	380										3		
Mollegabet II	381	U											
Monster	382	1											
Monster	383	1											
Monster	384	1											
Montfort	385												
Morgi	386	1											
Morin	387												
Morke Enge	388												
Mullerup	389								1				
Multorp	390								1	10			
Murzak-Koba	391		U										
N f Lilleo	392												
Naebbet	393	2											
Narpes	394												
Neu Jucha	395												
Neu Strelitz	396												
Newferry	397										1		
Newferry	398										1		
Newferry	399										1		
Ninove	400												
Nivagaard	401												
Nizhnee Veret'e	402	18											
Nizhnee Veret'e	403										2		
Nizhnee Veret'e	404										U		
Nizhnee Veret'e I	405												
Nizhnee Veret'e I	406										1		
Nizhnee Veret'e I	407										1		
Nizhnee Veret'e I	408										1		
Nolgarden	409					1		6					
Nord de Bruxelles	410	1											
Norrkopping	411		1										
Norsminde	412												
Nowa	413												
Nowa	414	1						2					

Table 6.4b (contd)

	SPECIFIC EXAMPLES												

Table 6.4b (contd)

	SPECIFIC EXAMPLES												
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Table 6.4b (contd)

	SPECIFIC EXAMPLES												
Site	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)	Bi-point
Padina I	491												
Padina I	492											1	
Padina I	493										1		
Padina I	494										1		
Padina I	495												1
Paris	496												
Peitschendorf	497												
Penken	498												
Petenkinnen	499					1		2					
Perkallen	500												
Pernau	501	1						2					
Pernau	502	1											
Pernau	503	1											
Pernau	504	1											
Pernau	505	1											
Pernau	506								1				
Pernau	507					1		2					
Pobiel 10	508												
Pobiel 11	509										U		
Pocas de Sao Bento	510												
Pommeroeul	511												
Pont D'Ambon	512												
Pont D'Ambon	513				1			6					
Porsemose	514												
Porth-y-waen	515					1							
Poulton-le-Flyde	516	1						6					
Poulton-le-Flyde	517	1						4					
Praesto	518												
Rabelovsjon	519					1		2					
Rabelovsjon	520								1	12			
Rabelovsjon	521	1						6					
Rabelovsjon	522	1						4					
Rabelovsjon	523	1						7					
Raklev	524								1				
Randers	525												
Rascano	526												
Reilhac	527												
Reilhac	528				1			3					

Table 6.4b (contd)

	SPECIFIC EXAMPLES												
	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)	Bi-point
Site													
Reilhac	529				1			4					
Rerslev	530												
Rheinbalm	531					1		4					
Rheinbalm	532					1		6					
Rhodes II	533												
Rhodes II	534				1			6					
Rhodes II	535				1			4					
Ringkloster	536										1		
Ringkloster	537											1	
Ringkloster	538										1		
Ringkloster	539										1		
Ringkloster	540										1		
Ringsjon	541												
Ringsted	542										1		
Risga	543					1							
Rochfort	544												
Rogaland	545												
Romsey	546												
Ronneholms Mosse	547												
Rosenhof	548	U											
Rotekarrslid	549												
Rotekarrslid	550		1										
Royston	551	1											
Rude II	552												
Rugen	553												
Ruthenie	554								1	4			
Salies du Salat	555												
Salitre	556												
Sandhuse Mose	557										1		
Sandhuse Mose	558												
Sandhuse Mose	559												
Sandlyng Skov	560												
Satrup	561										1		
Schela Cladovei	562										15	5	
Schotz	563					1							
Schoonaerde	564												
Seamer Carr	565								1	17			
Segebro	566												

Table 6.4b (contd)

Site	SPECIFIC EXAMPLES											
	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)
Segebro	567	1										
Shewalton	568					1						
Siedlung Forschner	569											
Sigenenben Sud	570	U										
Siiversti	571										1	
Siiversti	572	U										
Siretorp	573	1						4				
Siretorp	574	1						4				
Sjalko	575	1										
Sjoholmen	576	3						3				
Sjoholmen	577	1										
Sjoholmen	578	1										
Sjoholmen	579	1										
Sjoholmen	580	1										
Sjoholmen	581								42			
Sjoholmen	582								6			
Sjoholmen	583										8	
Sjoholmen	584										50	
Sjoholmen	585											
Sjoholmen	586											
Skaftalev	587					1		9				
Skane	588								1	8		
Skane	589	1										
Skateholm I	590											
Skellingsted Bro	591	4										
Skellingsted Bro	592	1						1				
Skellingsted Bro	593	1						2				
Skellingsted Bro	594	8										
Skellingsted Bro	595								6			
Skellingsted Bro	596								1			
Skellingsted Mose Nord	597											
Skipsea	598	1										
Skipshelleren	599											
Skjavik	600											
Skjoldnaes	601	2										
Skottemarke	602											
Skurups	603	1						5				
Slagelseegen	604											

Table 6.4b (contd)

	SPECIFIC EXAMPLES												
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Table 6.4b (contd)

	SPECIFIC EXAMPLES												
	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)	Bi-point
Site													
Svaerdborg I	643										1		
Svaerdborg I	644										1		
Svaerdborg I	645											1	
Svaerdborg I	646								1				
Svaerdborg I	647								1				
Svaerdborg 1 - Pre-Exc	648												
Svaerdborg II	649												
Svedstrup	650												
Sventoji	651												
Svinninge Veijle	652												
Szirgponen	653	1											
Szirgponen	654					1							
Taaderup	655												
Tange	656												
Tannstock	657										1		
Tarvastu	658								1				
Teviec	659											1	
Teviec	660												1
Teviec	661												1
Teviec	662												1
Thatcham	663												
Thatcham	664										1		
Thatcham	665										1		
Thatcham	666										1		
Thatcham	667										1		
Thatcham	668										1		
Thatcham	669										1		
Thatcham	670										1		
Thatcham	671										1		
Tingbjerggaard	672										1		
Tisso	673												
Tjorn	674								1	10			
Tlokowo	675								1	16			
Torning	676												
Torup	677												
Trorod	678												
Tubeok Molle	679			1				2					
Tybrind Vig	680										>100		

Table 6.4b (contd)

Site	SPECIFIC EXAMPLES										
	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points
Tybrind Vig	681										1
Tybrind Vig	682										1
Ulkestrup I	683										
Ulkestrup II	684										
Ulkestrup IV	685										
Undlose Bro	686	10									
Undlose Bro	687	1						5			
Undlose Bro	688	1						3			
Undlose Bro	689	1						4			
Undlose Bro	690	10									
Undlose Bro	691	1									
Undsted	692										
Urtiaga	693										
Vaby	694										
Vadsted	695										
Valle, Spain	696										
Vandlose	697										
Vasterbjers	698										
Vedbaek-Henriksholm Bogeba	699		U								
Vedbaek- Maglemosegard	700										U
Vedbaek-Maglemosegards Va	701										1
Vejby	702										
Vejle Lake	703										
Vejlebro	704										1
Verup Mose	705										
Vibygaard	706										
Viken Lake	707										
Villespy	708										
Vinde-Helsing	709										6
Vinde-Helsing	710										72 frags
Vinde-Helsing	711										22
Vinde-Helsing	712	1						1			
Vinde-Helsing	713	2						U			
Vinde-Helsing	714	1						U			
Vinde-Helsing	715	2						U			
Visby	716										
Viste	717										
Viste	718								1		

Table 6.4b (contd)

	SPECIFIC EXAMPLES												
Site	Specimen No.	Barbed (uniserial)	Barbed (perf unspec)	Barbed (uniserial perf)	Barbed (biserial perf)	Barbed (biserial)	Barbed (base)	Number of barbs	Slotted	Flint inserts	Simple points	Simple (with epiphysis)	Bi-point
Vlasac	719												
Vlasac	720	1											
Vlasac	721	1											
Wachtfelsen	722					1		5					
Waltham	723	1											
Wandsworth	724	1											
Waren	725												
Wendhausen	726												
Wichelen	727	1											
Wichelen	728												
Willebroek	729												
Wisleben	730												
Ystad	731												
Zalesie	732												
Zamostje II	733												
Zelev	734												
Zigeunhohle	735	1						2					
Zvejnieki	736												
Zvejnieki	737					1		2					
Zvejnieki	738	1						4					
Zvejnieki	739	U											
Zvidze	740					5							
Zvidze	741	2											
Zvidze	742					2							
Zvidze	743					1							
Zvidze	744										10		
Zvidze	745										1		
Zvidze	746										1		
Zvidze	747										1		

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^Λ	Clarks type ^Λ
Abri Cornille	1	11.1		U		01.02	1
Abri de Chinchon	2	7.2		U			
Acy	3			U			
Advik	4	7.1	B	U		06.05	11
Advik	5	5.3	B	U		06.05	11
Aero	6		C	wood			
Agerod ID	7	8.9x0.8	B	bone		01.02	1
Agerod ID	8	1.4x0.6x0.5	B	bone		07	
Agerod ID	9	6.5x1.7x0.5cm	B	bone		05.01	7
Agerod I:HC	10						
Agerod I:HC	11	7.2-15.1x1.0-1.5	B				
Agerod I:HC	12	15.7x1.5cm	C	deer long bone		02.03	2
Agerod I:HC	13	21.3x1.5cm	C	deer long bone		02.03	2
Agerod I:HC	14			rib			
Agerod I:HC	15	width<1cm		elk, red + roe deer		07.01	21
Agerod I:HC	16	21.3x <1cm	C			07.01	21
Agerod I:HC	17	4.6x2.3cm	B	antler		07.01	23
Agerod I:HC	18	15.1x2.2cm	B	antler		07.01	23
Agerod I:HC	19						
Agerod I:HC	20						
Agerod V	21			bone			
Agerod V	22	15.6x09	C	bone		07.02	21
Aggarps mosse	23			bone			
Aggarps mosse	24			U			
Aggersund	25						
Alby	26					02	2
Alby	27						
Amrum	28						
Appels	29						
Arhus	30						
Aveline's Hole	31						
Backaskog	32						
Ballyholme	33	12.0	C	bone		01.02	1
Barmose	34						
Barnewitz	35						
Barnow	36						
Battersea	37	22.7	C			03.01	6
Bernaufels	38	13.2				05.10	n/a
Bethune	39	18.6	B	reindeer antler		03.02	6
Bethune	40	21.5					
Birkemose	41						
Birsmatten	42						
Birsmatten	43	8.2					
Birsmatten	44	6.0	B			05.10	n/a
Birsmatten	45	7.6	C			05.10	n/a
Birsmatten	46	5.4	B			05.10	n/a
Bize, Petite Grotte	47	5.5	C				
Bize, Petite Grotte	48	14.5					
Bize, Grande Grotte	49						
Bjeresjo	50						
Bjornsholm	51						

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Bloksbjerg	52						
Bloksbjerg	53	27.0		swordfish sword		01.02	1
Bloksbjerg	54	10.8		bone		01.01	n/a
Bloksbjerg	55	11.4		bone		01.01	n/a
Bloksbjerg	56	10.8		bone		01.01	n/a
Bloksbjerg	57	10.8		bone		01.01	n/a
Bloksbjerg	58	7.5		bone		01.01	n/a
Bloksbjerg	59	5.2		bone		01.01	n/a
Bloksbjerg	60	16.2		U			
Bloksbjerg	61	10.3		antler			
Bohuslan	62						
Bornholm	63						
Bornholm	64	17.0	C	elk antler		05.10	n/a
Bothildenslund	65					02.02	3
Brabrand	66			wood			
Brandenburg	67						
Brandesburton	68	10.2		bone		03.01	6
Brandesburton	69	10.8		bone		03.01	6
Brandesburton	70	27.8		elk metacarpal/tarsal		03.01	6
Brandesburton	71	18.3		bone		03.01	6
Brandesburton	72	9.2		bone		03.01	6
Brandesburton	73	9.2		bone		03.01	6
Brodersby	74						
Bua Vastergard	75						
Bussjo Mosse	76	23.8	C	bone/antler		07.04	25
Calbe	77	15.4		bone/antler		02.01	2
Carstenminde	78						
Casteal nan Gilleann I	79						
Casteal nan Gilleann I	80			red deer antler		05.10	n/a
Castillo	81						
Charlottenlund	82						
Climente I	83			bone			
Climente II	84	9.0	C	deer antler			
Cnoc Coig	85			red deer antler			
Cnoc Sligeach	86			long bone/antler	flat		
Copenhagen	87						
Cranz	88						
Crouzade	89	6.5				05.02	n/a
Culoz	90						
Davlekanovo	91						
Deviete	92	15.5	B	antler		06.03	12B
Djursnas	93	21.0	C	bone/antler		n/a	n/a
Dobbertin	94						
Dobbertin	95	12.2		bone/antler		02.03	4
Dobbertin	96	21.6		bone/antler		04.01	5
Dohren	97						
Druimvargie	98			bone/antler	flat		
Dummersee	99						
Duvensee	100						
Duvensee	101	19.4		bone		02.01	2
Duvensee	102	14.0		bone		02.01	2
Dyrholm	103			wood			

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Earls Barton	104						
Eckersdorf	105						
El Pendo	106						
Elbing	107						
Ellemose	108						
Ellerbek	109		C			05.06	n/a
Emmererfscheidenveen	110	14.3				02.01	2
Emmersbaek	111					02.02	3
Ermitia	112						
Ertebolle	113						
Esperods Mosse	114						
Europoort	115						
Europoort	116	13.8					
Europoort	117	20.5				03.02	6
Europoort	118	13.5				04.02	4
Europoort	119	4.8				03.01	6
Europoort	120	5.3				03.01	6
Europoort	121	7.8				03.01	6
Europoort	122	4.5				03.01	6
Europoort	123	4.5				03.01	6
Europoort	124	4.5				03.01	6
Europoort	125	4.9				03.01	6
Europoort	126	6.2	B			05.10	n/a
Falkensteinhohle	127						
Falkensteinhohle	128	15.6				05.10	n/a
Falkensteinhohle	129	13.6				05.10	n/a
Fals Mosse	130						
Faurelie II	131						
Federsee	132			wood			
Felsstalle	133						
Fernewerder	134						
Fienerode	135						
Fjellenstrup	136						
Flatow	137						
Flynderhage	138						
Fohr	139						
Friesack	140						
Froser Seelandereien	141						
Gislinge	142						
Gneiwino	143	21.6		antler		04.01	5
Gohra-Worle	144	24.0				05.05	10
Gorlev	145						
Gourris	146						
Grena	147						
Gr-Steegan	148						
Gressbakken	149	14.9				06.07	11
Gronehelleren	150						
Gropbakkeengen	151						
Grotte de Pegourie	152	7.5cm	B			05.10	n/a
Grotte de Pegourie	153	7.8cm	B			05.10	n/a
Grotte de Pegourie	154	5.2cm	B			05.05	10
Grotte des Harpons	155						

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Grotte Massat	156						
Gudso Vig	157						
Gudso Vig	158	19.2	C	red deer antler		05.01	n/a
Gudso Vig	159	23.2	C	whale bone		05.03	7
Gusev	160						
Hallebygaard	161			bone		01.02	1
Hamme	162						
Hanger	163	25.2	C	bone/antler		04.02	8
Hassing Osterkaer	164						
Hastefjorden	165	23.0	C	bone		06.06	12A
Haubolle	166						
Havelland	167						
Havelland	168		C			06.06	12A
Havelland	169		C			06.03	12B
Havelland	170		C			04.02	8
Havelland	171		C			03.01	6
Havelland	172		C			02.01	2
Havelland	173		C			08.02	17
Havelland	174		C			01.02	1
Havelland	175		C			04.04	15
Havelland	176		C			n/a	19
Hemmor	177						
Henauhof Northwest Stratum 6	178						
Henauhof Northwest Stratum 5	179						
Henauhof Northwest Stratum 4	180						
Henauhof Northwest Stratum 3	181						
Herlufmagle	182			bone			
Heusden	183						
Hinge So	184						
Hirtzkirch-Seematt	185			antler			
Hjembaek	186	22.8				20.02	n/a
Hoedic	187	20.6	C			n/a	n/a
Hoedic	188	10.3	C			n/a	n/a
Hoedic	189	14.5	C			n/a	n/a
Hoedic	190	11.0	C			01.01	n/a
Hoedic	191	4.8	C			01.01	n/a
Hofderup	192						
Hohen Viecheln	193	15-20cm		long bone	und ov	01.02	1
Hohen Viecheln	194	18-20cm		long bone	t/angul	01.02	1
Hohen Viecheln	195	10-20cm (10-13pred)		long bone		02	2-4
Hohen Viecheln	196	10-20cm		red deer metatarsal	oval	04.02	8
Hohen Viecheln	197	17-20cm		deer long bone		03	6
Hohen Viecheln	198	16-20cm		red deer metapodial		05.03	7
Hohen Viecheln	199	15-28.4cm		rib		05.03	7
Hohen Viecheln	200	9.3	B	deer bone		08.07	12A
Hohen Viecheln	201	U		U		U	U
Hohen Viecheln	202						
Hohen Viecheln	203						
Hohen Viecheln	204						
Hohen Viecheln	205						
Hohen Viecheln	206						
Hoilandsvandet	207						

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Holmegaard I	208	up to 12cm		long bone	9=round	01.02	1
Holmegaard I	209	16.8cm		antler		01.02	1
Holmegaard I	210	12cm		rib		05.03	7
Holmegaard I	211	7-13cm		long bone		05.03	7
Holmegaard I	212			long bone		05.03	7
Holmegaard I	213			rib		05.03	7
Holmegaard I	214			long bone		05.03	7
Holmegaard I	215			rib		05.03	7
Holmegaard I	216	11.6cm		long bone		05.03	7
Holmegaard I	217			rib		05.03	7
Holmegaard I	218			long bone		05.03	7
Holmegaard I	219			bone		05.03	7
Holmegaard I	220			wood		01.02	1
Holmegaard I	221	12.4cm		wood		01.02	1
Holmegaard I	222	12.2cm		wood		01.02	1
Holmegaard IV	223	26.7x0.9		wood		20.01	24
Holmegaard IV	224	9.2x0.6	B	wood		01.02	1
Holmegaard IV	225	7.2x0.9	B	wood		01.02	1
Holmegaard IV	226	10.8x0.8	B	wood		01.02	1
Holmegaard IV	227	9.6x0.8	B	wood		01.02	1
Holmegaard IV	228	6.0x0.9	B	wood		01.02	1
Holmegaard V	229						
Hook of Holland	230						
Horninge Mosse	231						
Horninge Mosse	232	26.7	C	wood		n/a	14
Horninge Mosse	233	24.9	C	wood		n/a	14
Horne	234						
Hornsea	235	25.3	C	antler		03.01	6
Horsensfjord	236	23.1	C	roe deer antler		05.07	n/a
Hylteberga Mosse	237			roe deer antler			
Icoana	238						
Ingelstad	239	21.1	C	bone/antler		02.02	3
Inzigkofen	240						
Isbergues	241						
Istaby	242						
Istaby	243	14.0		bone/antler		n/a	n/a
Istaby	244	20.0	C			02.02	3
Isturitz	245						
Isturitz	246	14.0					
Jagersshohle	247						
Jonstrup Vaenge	248						
Jordlose Mose II	249			U			
Kallingemore Mosse	250						
Kara Koba	251			bone			
Karby	252						
Kassemosse	253						
Kents Cavern	254						
Kildegaard	255			bone		01.02	1
Kildegaard Ost	256						
Koldingfjord	257						
Koldingfjord	258	30.2		whale bone		01.02	1
Kongemosen	259	13.0				20.01	n/a

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Kongsted	260					02	2,3,4 or 6 ?
Kongsted	261						
Konnu	262						
Kopu	263						
Koster	264						
Kosuchen	265						
Krampkewitz	266						
Kunda	267			bone			
Kunda	268	28.2				05.03	7
Kunda	269	22.2				03.01	6
Kunda	270	15.0				03.01	6
Kunda	271	24.0				08.03	18
Kunda	272	18.0				n/a	n/a
Kunda	273	19.5				08.01	16
Kunda	274	24.0				08.07	20
Kunda	275	9.6				07.04	25
Kusserow	276						
La Haine	277						
La Paloma	278						
La Riera	279					05.03	7
La Riera	280	8.2	B	antler			
La Tourasse	281						
La Tourasse	282	13.0				n/a	n/a
La Tourasse	283	10.2				n/a	n/a
La Tourasse	284	10.0				05.02	n/a
La Tourasse	285	13.0				05.02	n/a
La Vache	286						
La Vache	287	8.0				05.02	n/a
La Vache	288	8.8				05.11	n/a
Lachmirowice	289			bone		06.07	9
Lake Lubana	290						
Langeland Island	291						
Lango	292	17.4	B	whale bone		01.02	1
Lango	293						
Lapsi VII	294			antler			
Lattmoor	295						
Laugerie Basse	296						
Lautereck	297						
Le Trou Violet	298	3.3	B			06.04	n/a
Le Trou Violet	299	5.8				01.01	1
Le Trou Violet	300	6.2				01.02	1
Le Trou Violet	301	5.0				01.02	1
Le Trou Violet	302	4.2				01.02	1
Le Trou Violet	303	3.7				01.02	1
Leman-Ower	304	21.8		antler		03.01	6
Lepenski Vir	305	9.0	B	bone			
Lepenski Vir	306	7.0	C	bone			
Liesbergmuli 6	307	12.0	C			05.10	n/a
Liesbergmuli 7	308	10.0	B			05.10	n/a
Liesbergmuli 8	309	11.2	C			05.10	n/a
Liesbergmuli 9	310	5.6	B			05.10	n/a
Liesbergmuli 10	311	7.2	B			05.10	n/a

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Lille Baelt	312	48.0	C	antler		n/a	n/a
Lippe	313						
Lohusu	314						
Lojesmolle	315						
Lojesmolle	316	19.6				04.01	5
Lojesmolle	317	16.0				02.03	4
Lojesmolle	318	19.6				05.03	7
Lojesmolle	319	14.0				06.06	12A
Longueroche	320						
Lorby	321						
Lorthet	322						
Los Azules I	323						
Los Azules I	324	9.5cm	C			05.02	n/a
Los Azules I	325	6.1cm	C			05.02	n/a
Los Azules I	326	7.3cm	C			05.02	n/a
Lumentxa	327						
MacArthur's Cave	328						
MacArthur's Cave	329	6.6	B	long bone/antler	flat	05.10	n/a
MacArthur's Cave	330		C			05.10	n/a
MacArthur's Cave	331		C			05.11	n/a
Magleo	332			bone		05.03	7
Magleo	333			bone		01.02	1
Masieres	334						
Marietorp	335	10.8	B	hawthorn		06.04	n/a
Marzenin	336					01.02	1
Mas d'Azil	337						
Mas d'Azil	338	17.6cm	C			05.04	9
Mas d'Azil	339	8.8cm	C			05.04	9
Mas d'Azil	340	8.2				05.04	9
Mas d'Azil	341	8.5				05.04	9
Mas d'Azil	342	6.3				05.11	n/a
Mas d'Azil	343	7.9				05.11	n/a
Mas d'Azil	344	8.3				05.11	n/a
Mas d'Azil	345	9.0				05.11	n/a
Mas d'Azil	346	7.1				05.11	n/a
Mas d'Azil	347	9.8				05.11	n/a
Mas d'Azil	348	9.2				05.11	n/a
Mas d'Azil	349	8.1				05.11	n/a
Mas d'Azil	350	7.2				05.11	n/a
Mas d'Azil	351	8.1				05.11	n/a
Mas d'Azil	352	9.8				05.11	n/a
Mas d'Azil	353	9.6				05.11	n/a
Mas d'Azil	354	8.5				05.11	n/a
Mas d'Azil	355	7.8				05.11	n/a
Mas d'Azil	356	7.7				05.11	n/a
Mas d'Azil	357	8.2				05.11	n/a
Mas d'Azil	358	6.7				05.11	n/a
Mas d'Azil	359	6.1				05.11	n/a
Mas d'Azil	360	7.9				05.11	n/a
Mas d'Azil	361	8.2				05.11	n/a
Mazaculos	362						
Mechelen	363						

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Mecklenburg	364						
Meiendorf	365	18.0cm		reindeer antler		01.02	1
Meiendorf	366	16.1cm		reindeer antler		01.02	1
Meiendorf	367	11.2cm		reindeer antler		01.02	1
Meiendorf	368	12.7cm		reindeer antler		01.02	1
Meiendorf	369	10.9cm		reindeer antler		01.02	1
Meiendorf	370	9.8cm		reindeer antler		n/a	n/a
Meiendorf	371	11.6cm		reindeer antler		06.06	12A
Melle	372						
Menturren	373	18.4				07.02	21
Mitteldorf	374						
Mjallby Mosse	375						
Moen	376						
Mollegabet I	377			wood			
Mollegabet II	378			antler tine			
Mollegabet II	379			wood			
Mollegabet II	380			wood			
Mollegabet II	381			wood			
Monster	382	12.4	B			04.02	8
Monster	383	10.2	B			04.02	8
Monster	384	6.4	B			04.02	8
Montfort	385						
Morgi	386		B	bone		03.02	4
Morin	387						
Morke Enge	388						
Mullerup	389				broad		
Multorp	390	16.4	C	bone/antler		07.02	21
Murzak-Koba	391			bone			
N f Lilleo	392						
Naebbet	393		C	wood			
Narpes	394						
Neu Jucha	395						
Neu Strelitz	396						
Newferry	397	4.3	B	bone			
Newferry	398	2.4	B	bone			
Newferry	399	2.2	B	bone			
Ninove	400						
Nivagaard	401						
Nizhnee Veret'e	402			wood			
Nizhnee Veret'e	403			wood			
Nizhnee Veret'e	404			bone			
Nizhnee Veret'e I	405						
Nizhnee Veret'e I	406	120.0	C	wood		01.02	1
Nizhnee Veret'e I	407	145.0	C	wood		01.02	1
Nizhnee Veret'e I	408	270.0	C	wood		01.02	1
Nolgarden	409	15.9		bone/antler		n/a	n/a
Nord de Bruxelles	410	9.2	B			04.02	6
Norrkopping	411			bone/antler			
Norsminde	412						
Nowa	413						
Nowa	414			bone		05.03	7
Nowa	415					08.06	20

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Nyelv Nedre Vest	416	5.1				01.02	1
Nyelv Nedre Vest	417					01.02	1
Nyelv Nedre Vest	418	5.7				01.01	1
Nyelv Nedre Vest	419	4.8				01.01	n/a
Nyelv Nedre Vest	420	6.6				01.02	1
Nyelv Nedre Vest	421	4.4				01.01	n/a
Nyelv Nedre Vest	422					04.03	n/a
Nyelv Nedre Vest	423					05.03	7
Nyelv Nedre Vest	424	22.6				05.05	10
Nyelv Nedre Vest	425	28.2				06.05	11
Nyelv Nedre Vest	426	9.0				06.04	11
Nyelv Nedre Vest	427	8.7				06.07	11
Nyelv Nedre Vest	428	10.5				06.07	11
Nyelv Nedre Vest	429	11.6				06.04	11
Nyelv Nedre Vest	430	10.2				05.02	n/a
Nyelv Nedre Vest	431	3.5	B				
Obourg	432						
Odense	433						
Odmut	434	8.1	C	antler		05.02	n/a
Odmut	435	8.4	C	antler		05.02	n/a
Odmut	436	8.1	C	antler		05.02	n/a
Odmut	437	9.6	C	antler		05.02	n/a
Odmut	438	9.6	C	antler		05.02	n/a
Odmut	439	9.3	C	antler		05.02	n/a
Odmut	440	10.8	C	antler		05.02	n/a
Odmut	441	9.5	C	antler		05.02	n/a
Odmut	442	26.7	C	antler		05.02	n/a
Odmut	443	12.3	C	antler		05.02	n/a
Odmut	444	9.6	C	antler		05.02	n/a
Odmut	445	11.7	C	antler		05.02	n/a
Odmut	446	4.5	C	antler		n/a	n/a
Odmut	447	6.9	C	antler		06.05	11
Odmut	448	6.2	B	antler		U	U
Odsherred	449	20.1	C			07.04	22
Offerdals	450	26.4	C			n/a	n/a
Ogaarde	451			bone		05.03	7
Ogaarde	452			bone			
Ogaarde	453			bone			
Ogaarde	454	12x0.6cm	C	bone		05.03	7
Ogaarde	455	9.6x1.35cm	C	bone		05.03	7
Ogaarde	456	5.7x0.75cm	B	bone		05.03	7
Ogaarde	457	up to 14cm		rib		05.03	7
Ogaarde	458	15.8x2.25cm	B	rib		05.03	7
Ogaarde	459	10.5x1.5cm	C	bone		05.03	7
Ogaarde	460			rib			
Ogaarde	461			rib			
Ogaarde	462			rib			
Ogaarde	463			rib			
Ogaarde	464			U		02	2,3,4 or 6 ?
Ogaarde	465	2.7x0.9cm		U		04.01	5
Ogaarde	466	5.6x2.4cm		antler		01.02	1
Ogaarde	467			antler			

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Ogaarde	468	6.8cm & 16.6cm	B	bone	flat	07.01	24
Ogaarde	469	14.0x1.8cm	B	bone		07.01	23
Ogaarde	470	9.6x2.1cm	B	bone		07.01	23
Ogaarde	471	5.1x2.6cm	B	bone		07.01	23
Ogaarde	472	18.0x1cm	C	bone		07.01	23
Ogaarde	473			bone			
Ogaarde	474			bone		01.02	1
Ogaarde	475	12.2cm	C	roe deer long bone		01.02	1
Ogaarde	476	16.0cm	B	rib		01.02	1
Ogaarde	477			U			
Ogaarde	478					05.03	7
Oleni Ostrov	479	9.9		bone		05.03	7
Oleni Ostrov	480	10.4		bone		08.03	18
Oleni Ostrov	481	10.3		bone		08.01	16
Orebro	482						
Ornskoldvik	483	19.0	C	bone/antler		06.03	12B
Oslo	484						
Ossowo	485						
Ossowo	486		C	bone		06.03	12B
Ostroleka	487						
Ostovul Mare	488			bone			
Oulu	489						
Oxie	490						
Padina I	491						
Padina I	492	10.2		bone		n/a	n/a
Padina I	493	11.4		bone		01.02	1
Padina I	494	10.5		bone		01.02	1
Padina I	495	10.0		bone		01.02	1
Paris	496						
Peitschendorf	497						
Penken	498						
Petenkinnen	499	22.0		bone/antler		08.02	17
Perkallen	500						
Pernau	501	9.9				03.01	6
Pernau	502	22.2				n/a	19
Pernau	503	21.6				04.01	5
Pernau	504	12.0				03.01	6
Pernau	505	20.1				08.03	18
Pernau	506	22.5				07.02	21
Pernau	507	17.4				08.02	17
Pobiel 10	508						
Pobiel 11	509						
Pocas de Sao Bento	510						
Pommeroeul	511						
Pont D'Ambon	512						
Pont D'Ambon	513	15.0	B	bone antler		05.11	n/a
Porsemose	514						
Porth-y-waen	515	14.3	B	antler	oval	03.01	6
Poulton-le-Flyde	516	12.7	B	bone	oval	03.01	6
Poulton-le-Flyde	517	8.2	B	bone	oval	03.01	6
Praesto	518						
Rabelovsjon	519	25.0	C	bone/antler		n/a	n/a
Rabelovsjon	520	18.8	C	bone/antler		07.02	21

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Rabelovsjon	521	15.4	C	bone/antler		03.01	6
Rabelovsjon	522	16.4	C	bone/antler		05.03	7
Rabelovsjon	523	14.3	C	bone		n/a	n/a
Raklev	524	21.9				20.02	n/a
Randers	525						
Rascano	526						
Reilhac	527						
Reilhac	528	5.0				05.11	n/a
Reilhac	529	4.9				05.11	n/a
Rerslev	530						
Rheinbalm	531	12.4				05.10	n/a
Rheinbalm	532	16.8				05.10	n/a
Rhodes II	533						
Rhodes II	534	10.5		bone/antler			
Rhodes II	535	11.0		bone/antler			
Ringkloster	536	14.1x2.2		wood		01.02	1
Ringkloster	537	7.5		bone		n/a	n/a
Ringkloster	538	7.5		bone		01.02	1
Ringkloster	539	5.4		bone		01.02	1
Ringkloster	540	4.5		bone		01.02	1
Ringsjon	541						
Ringsted	542			auroch bone		20.01	24
Risga	543			long bone/antler	flat		
Rochfort	544						
Rogaland	545						
Romsey	546						
Ronneholms Mosse	547						
Rosenhof	548			wood			
Rottjarnslid	549						
Rottjarnslid	550			bone			
Royston	551	11.2		bone	oval	03.01	6
Rude II	552						
Rugen	553						
Ruthenie	554					23	07.02
Salies du Salat	555						
Salitre	556						
Sandhuse Mose	557					01.02	1
Sandhuse Mose	558						
Sandhuse Mose	559						
Sandlyng Skov	560						
Satrup	561	175.0		wood		01.02	1
Schela Cladovei	562			antler/bone			
Schotz	563	4.4	B			05.10	n/a
Schoonaerde	564						
Seamer Carr	565			wood			
Segebro	566						
Segebro	567					02	2
Shewalton	568			long bone/antler	flat		
Siedlung Forschner	569						
Sigenenben Sud	570			wood			
Siiversti	571			bone			
Siiversti	572			bone		08.03	18

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Siretorp	573	21.0	C	bone		04.02	8
Siretorp	574	21.6	C	bone		04.02	8
Sjalko	575					02	2
Sjoholmen	576			deer long bone		06.06	12A
Sjoholmen	577	1.7x1.7cm				02.01	2
Sjoholmen	578	12.7cm				02.01	2
Sjoholmen	579	4.3cm				02.01	2
Sjoholmen	580					02.01	2
Sjoholmen	581	narrow 2.1-16.3cm				07.01	
Sjoholmen	582	broad				07.01	
Sjoholmen	583	broad		roe deer long bone		01.01	
Sjoholmen	584	2.6-12.6cm		red deer long bone		01.02	1
Sjoholmen	585						
Sjoholmen	586						
Skafteløv	587	25.0		reindeer antler		06.03	12B
Skane	588	21.8		bone/antler		07.04	22
Skane	589	28.6				02.02	3
Skateholm I	590						
Skellingsted Bro	591			long bone		05.03	7
Skellingsted Bro	592	16.3cm		long bone		04.01	5
Skellingsted Bro	593	14.2cm		long bone		05.03	7
Skellingsted Bro	594			long bone		03.01	6
Skellingsted Bro	595			U		07.01	n/a
Skellingsted Bro	596					07.04	25
Skellingsted Mose Nord	597						
Skipsea	598	12.0		bone	oval	03.01	6
Skipshelleren	599						
Skjavik	600						
Skjoldnaes	601			U			
Skottemarke	602						
Skurups	603	19.2	C			06.06	12A
Slagelseegen	604						
Soborg So	605						
Soholm	606						
Solager	607						
Sonderod	608						
Sorbehen	609						
Sproughton I	610	19.5	B	bone		03.01	6
Sproughton II	611	21.5	B	antler		03.01	6
Star Carr	612			187=antler, 2=bone			2,3,4 & 6
Stellmoor	613						
Stellmoor	614	18.2		reindeer antler		06.06	n/a
Stellmoor	615	14.8		reindeer antler		n/a	n/a
Stellmoor	616	15.5		reindeer antler		06.03	12B
Stellmoor	617	7.5		reindeer antler		06.03	12B
Stokkeborg	618						
Stora Bjers	619						
Stora Dode Mosse	620						
Stora Forvar-Stora Karlso	621						
Store Vildmose	622						
Stryno Basin	623						
Svaerdborg I	624						

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Svaerdborg I	625	19.3				05.03	7
Svaerdborg I	626	10.7				02.02	3
Svaerdborg I	627	8.2				05.03	7
Svaerdborg I	628	5.4				05.03	7
Svaerdborg I	629	9.0				05.03	7
Svaerdborg I	630	8.0				05.03	7
Svaerdborg I	631	4.8				05.03	7
Svaerdborg I	632	3.9				03.01	3
Svaerdborg I	633					03.01	3
Svaerdborg I	634	16.5				05.03	7
Svaerdborg I	635	8.7				05.03	7
Svaerdborg I	636	6.7				04.01	5
Svaerdborg I	637	8.6				05.03	7
Svaerdborg I	638	12.8				05.03	7
Svaerdborg I	639	10.1				05.03	7
Svaerdborg I	640	10.5				01.01	n/a
Svaerdborg I	641	5.6				07.01	n/a
Svaerdborg I	642	3.0				01.02	1
Svaerdborg I	643	3.2				01.02	1
Svaerdborg I	644	7.2				01.02	1
Svaerdborg I	645	12.0				n/a	n/a
Svaerdborg I	646		B			07.01	21
Svaerdborg I	647					07.04	22
Svaerdborg 1	648						
Svaerdborg II	649						
Svedstrup	650						
Sventoji	651						
Svinninge Veijle	652						
Szirgponen	653	25.4		bone/antler		03.01	6
Szirgponen	654	16.3		bone/antler		08.05	13
Taaderup	655						
Tange	656						
Tannstock	657			bone		01.02	1
Tarvastu	658	26.3	C	wood		07.01	n/a
Teviec	659	6.3	C	antler		n/a	n/a
Teviec	660	8.2	C	antler		n/a	n/a
Teviec	661	6.6	C	antler		n/a	n/a
Teviec	662	6.7	C	antler		n/a	n/a
Thatcham	663						
Thatcham	664	11.6	C			01.02	1
Thatcham	665	1.9	B			01.02	1
Thatcham	666	2.3	B			01.02	1
Thatcham	667	2.0	B			01.02	1
Thatcham	668	6.2	B			01.02	1
Thatcham	669	8.8	B			01.02	1
Thatcham	670	5.4	B			01.02	1
Thatcham	671	18.2	C			01.02	1
Tingbjerggaard	672			bone		01.02	1
Tisso	673						
Tjorn	674	14.2				07.02	21
Tlokowo	675	16.0				07.02	21
Torning	676						

Table 6.4b (contd)

Site	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type ^a	Clarks type ^a
Torup	677						
Trorod	678						
Tuboe Molle	679	21.4	C	red deer antler		05.02	n/a
Tybrind Vig	680			wood			
Tybrind Vig	681	17.8		bone		01.02	1
Tybrind Vig	682	10.3		bone		n/a	n/a
Ulkestrup I	683						
Ulkestrup II	684						
Ulkestrup IV	685						
Undlose Bro	686					5.03	7
Undlose Bro	687	21cm	C	rib		5.03	7
Undlose Bro	688	19cm	C	long bone		5.03	7
Undlose Bro	689	17cm	C	long bone		5.03	7
Undlose Bro	690			bone		02	2,3,4 or 6 ?
Undlose Bro	691			bone		05	
Undsted	692					03.01	6
Urtiaga	693						
Vaby	694						
Vadsted	695						
Valle, Spain	696						
Vandlose	697						
Vasterbjers	698						
Vedbaek-Henriksholm Bogebakken	699			antler			
Vedbaek- Maglemosegard	700			wood			
Vedbaek-Maglemosegards Vaenge	701			wood			
Vejby	702						
Vejle Lake	703						
Vejlebro	704		B	red deer antler		01.02	1
Verup Mose	705						
Vibygaard	706						
Viken Lake	707						
Villespy	708						
Vinde-Helsing	709			long bone		01.02	1
Vinde-Helsing	710			long bone		01.02	1
Vinde-Helsing	711			rib		01.02	1
Vinde-Helsing	712			long bone		05.03	7
Vinde-Helsing	713			rib		05.03	7
Vinde-Helsing	714			long bone		05.03	7
Vinde-Helsing	715			indet		05.03	7
Visby	716						
Viste	717						
Viste	718	6.4				07.01	n/a
Vlasac	719						
Vlasac	720					05.03	7
Vlasac	721					05.03	7
Wachtfelsen	722	10.0				05.10	n/a
Waltham	723						
Wandsworth	724	15.2				02.02	3
Waren	725						
Wendhausen	726						
Wichelen	727	18.4	B				
Wichelen	728						

Table 6.4b (contd)

	Specimen No	Dimensions	Complete/broken	Material	X-section	Verharts type [^]
Site						Clarks type [^]
Willebroek	729					
Wisleben	730					
Ystad	731					
Zalesie	732					
Zamostje II	733					
Zelev	734					
Zigeunhohle	735	8.0	B			05.10
Zvejnieki	736					n/a
Zvejnieki	737	16.8	C			08.05
Zvejnieki	738	16.4	C			05.03
Zvejnieki	739	6-30cm		bone		03.01
Zvidze	740		C	bone		08.03
Zvidze	741		B	bone		02.01
Zvidze	742		C	bone		08.05
Zvidze	743		C	bone		08.03
Zvidze	744		B	split long bone		01
Zvidze	745		C	bone		01.01
Zvidze	746			bone		01.02
Zvidze	747		C	wood		01.02

[^]- see Apeendix 2 for details of point typologies

Table 6.5 - Summary of Databases

Total number of sites	646
Total number of coastal sites	242
Total number of inland sites	401
Total number of Early Mesolithic sites	326
Total number of Late Mesolithic sites	227
Total number of contexts with fish remains	204
Total number of sites with fishing related artefacts	482
Number of sites in the East Baltic zone	55
Number of sites in the West Baltic zone	268
Number of sites in Central Europe	108
Number of sites in the Mediterranean zone	6
Number of sites in the Mediterranean zone: coastal	6
Number of sites in the north Atlantic zone	53
Number of sites in the south Atlantic zone	77
Number of sites in the Benelux zone	19
Number of sites in the Iron Gates zone	11
Number of sites in south-west Sweden and the Norwegian coast	33
Total number of identified fish species	101
Total number of recovered artefact types	22

Table 6.6 Sites with faunal assemblages demonstrating specialisation in fishing activities (including those sites with fish assemblages >50 NISP — see Table 6.2 — and those for which fishery specialisation is explicitly stated in published reports).

Site	Species Focus
Advik	Cod
Akonge	Cyprinidae
Angsnes	Cod & Saithe
Agerod	Eel
Bjornsholm	Eel
Bua Vastergard	Cod
Cabeco da Arruda	Grey Mullet
Cabeco da Amoreira	Grey Mullet
Cnoc Coig	Saithe
Cuina Turcului	Bream
Ertebolle	Cyprinidae
Falkensteinhohle	Cyprinidae
Franchthi	Bluefin Tuna
Goldcliff	Eel
Gressbakken	Cod
Grisby	Gadidae
Gropbakkeengen	Cod
Henauhof Nordwest	Pike
Henriksholm Bogebakken	Flatfish & Gadidae
Hoybukt	Cod & Saithe
Inzigkopfen	Grayling
Konnu	Pike
Kunda	Pike
Lepenski Vir I	Carp
Loddesborg	Cod
Loona	Cod
Lough Boora	Eel
Lystrup Enge	Shark
Magleholm	Gadidae

Table 6.6 (contd)

Site	Species Focus
Maglemosegard	Flatfish & Gadidae
Maglemosegards Vaenge	Flatfish
Monte Leone	Pilchard
Morton B	Cod
Mount Sandel	Salmonidae
Narva	Pike
Nederst	Eel
Norsminde	Flatfish
Nyelv Nedre Ost (Lossoa's Hus)	Cod
Nyelv Nedre Vest	Cod
Ogaarde	Pike
Olby Lyng	Cod
Ordrup Naes	Mackerel
Ostenkaer	Pike
Padina I	Catfish
Praestelyngen	Pike
Pulli	Pike-perch
Rottjarnslid	Ling
Schela Cladovei	Cyprinidae
Skateholm I	Pike & Perch
Skateholm II	Pike
Stationsvej 19	Gadidae
Svaerdborg I	Pike
Tybrind Vig	Cod
Vaenget Nord	Flatfish & Gadidae
Vidigal	Smoothhound
Viste	Cod
Yderhede	Spurdog & Flatfish
Zvidze	Pike

Table 6.7 - Expected Preservation Bias in Fish Fauna Recovery — Traditional View

Over-represented	Under-represented
Adults	Juveniles
Lean species	Fatty species
Heavily calcified/mineralised elements	Cartilaginous elements/species
Larger species	Smaller species
Larger elements within species	Smaller elements within species
	Cooked/heated bones
Alkali environments	Acid environments

Table 6.8 Preservation bias — Experimental results

Data from Nicholson (1996a):

Initial study excavated 4 sites, after 7 years burial. These sites are

10 – moor, humus iron-pan stagnopodzol pH 3.2-4.5

14 – garden soil, worked clay loam, pH neutral

15 – deciduous woodland, moderately drained stagnoleic brown earth, pH 3.3-4.5

16 – chalk rendzina, pH 7.5-8.0

Bones collected by hand and sediment sieved through 1mm mesh.

Animal	Length mm	Weight g	Total no. of bones	Site % Recovery			
				10	14	15	16
Rat	200-215	210-272	91	55	78	66	97
Pigeon	330-355	212-254	48	46	95	85	90
Boiled cod	422-460	665-735	113	2	16	13	38
Fresh cod	445-640	670-780	113	1	98	58	85
Fresh plaice	295-352	230-340	113	0	93	60	58
Baked plaice	321-340	295-365	113	0	76	46	74
Fresh herring	279-286	145-160	98	0	89	39	71
Baked herring	276-307	155-205	98	0	56	5	82
Filleted whiting	300-360	220-325	113	0	44	42	58

Table 7.1 - Fish Size Reconstruction

Site	Fish Species	Size Range	Comments*
Akonge	Crucian carp	15-32cm	medium-large
Akonge	perch	up to 40cm	large
Akonge	pike	15-126cm	small-large
Akonge	tench	14-44cm	small-medium
Bjornsholm	eel	17-118cm	medium-large
Bjornsholm	roach	5.0-23.5cm	small-medium
Bua Vastergard	cod	26-102cm	small-medium
Bua Vastergard	ling	90-170cm	medium-large
Ertebolle	eel	24-82cm	medium-large
Ertebolle	garfish	~	large
Ertebolle	roach	4.5-24.5cm	small-medium
Goldcliff	eel	15-29cm	most 15-18cm small
Goldcliff	Gobiidae	<7cm	small
Goldcliff	smelt	=<8.7cm	small
Goldcliff	3-spined stickleback	=<4.5cm	small
Goldcliff	flatfish	1.3-2.0cm	small
Grisby	cod	30-90cm	small-medium
Grisby	plaice/flounder/dab	22-36cm	medium
Henriksholm-Bogebakken	cod	16-68cm	small
Henriksholm-Bogebakken	plaice/flounder/dab	20-43cm	medium-large
Hohen Viecheln	perch	c.40-45cm	large
Lough Boora	eel	yellow & brown	small-medium
Lystrup Enge	cod	21-66cm	small
Lystrup Enge	plaice/flounder/dab	20-35cm	medium
Magleholm	cod	35-44cm	small
Maglemosegard	cod	20-73cm	small-medium
Maglemosegard	whiting	22-43cm	small-medium
Maglemosegard	plaice/flounder/dab	20-43cm	medium-large
Maglemosegards Vaenge	cod	23-53cm	small
Maglemosegards Vaenge	plaice/flounder/dab	19-36cm	medium
Morton	cod	c.50 - >100cm	small-medium
Morton	Atlantic sturgeon*	c.3m c.250kg	large
Nederst	cod	17-75cm	small-medium
Nederst	eel	24-89cm	medium-large
Nederst	plaice/flounder/dab	15-40cm	small-large
Nivagaard	cod	49-110cm	small-medium
Norsminde	cod	16-38cm	small
Norsminde	plaice/flounder/dab	15-37cm	small-medium
Olby Lyng	cod	31-80cm	small-medium
Padina	catfish	89.0-204.0cm	38 large specimens
Praestelyngen	pike	30-70cm	small-medium
Ringkloster	pike	17-130cm	small-large large specimens dominate

Table 7.1 (contd)

Site	Fish Species	Size Range	Comments [*]
Skateholm	cod	<25cm	very small
Skateholm	herring	16-40cm	medium-large
Skateholm	perch	>30cm	large
Skateholm	pike	av. 45cm up to 90cm	medium
Skateholm	porbeagle	c.2m	medium
Skateholm	catfish	1.2m	one specimen
Solager	cod	26-64cm	small
Stationsvej 19	cod	29-63cm	small
Stationsvej 19	plaice/flounder/dab	23-35cm	medium
Tybrind Vig	cod	36-60cm	small
Vaenget Nord	cod	34-70cm	small
Vaenget Nord	plaice/flounder/dab	23-30cm	medium
Vedbaek	cod	15-55cm c.0.1-1.5kg	small
Vedbaek	flatfish	20-35cm	average size
Vlasac	catfish	>100kg	large
Zvidze	beluga*	1.75-5.00m	medium-large
Zvidze	catfish	1.05-2.25cm	medium-large

* - size reconstruction determined from recovered scutes.

* - classification of fish by size is based on modern size ranges for each species – see Table 5.2

References: Andersen 1991, Bokonyi 1971, J M Coles 1971, Enghoff 1983, 1986, 1994a & 1995, Ingrem 2000, L Jonsson 1988, Loze 1988, Noe-Nygaard 1983, Trolle-Lassen 1984, Wigforss 1995, Woodman 1978, Wundsch 1961.

	SIMPLE POINTS	BARBED POINTS	BI-POINTS	(HOOK-RELATED)	BONE HOOKS	NET DÉCOR	UNSP. POINTS	SLOTTED POINTS	ICE PICKS	(NET-RELATED)	BOATS	TRAPS
GROUPED GADIDS	6.81	2.05	0.03	5.78	5.56	0.05	0.14	1.24	0.00	0.16	0.22	0.14
PIKE	10.07	14.41	8.88	1.17	0.95	4.95	4.46	1.15	1.71	0.88	0.17	0.17
COD	7.26	2.03	0.03	6.83	6.71	0.07	0.02	1.55	0.00	0.17	0.28	0.17
GROUPED CYPRINIDS	4.24	13.14	0.07	0.76	0.45	6.97	6.31	1.31	0.00	1.17	0.21	0.24
CYPRINIDS	4.44	0.69	0.13	1.31	0.75	0.44	0.06	0.06	0.00	0.38	0.31	0.44
GROUPED FLATFISH	7.06	0.56	0.00	2.83	2.24	0.06	0.11	0.22	0.00	0.22	0.39	0.22
SAITHE	3.38	2.38	0.00	10.25	9.50	0.00	0.13	0.88	0.00	0.13	0.19	0.06
PL./FL./DAB	2.60	0.20	0.00	3.20	2.20	0.10	0.00	0.10	0.00	0.10	0.50	0.30
CATFISH/WELS	3.00	7.93	24.20	0.33	0.33	0.60	0.07	0.47	0.00	0.40	0.13	0.27
EEL	6.95	6.05	0.00	1.71	1.20	9.29	7.48	1.81	0.00	0.19	0.38	0.38
PERCH	3.61	15.94	0.06	2.06	1.56	10.78	5.11	2.00	3.89	1.72	0.28	0.39
GADIDS	2.60	0.20	0.00	3.20	2.20	0.10	0.00	0.10	0.00	0.10	0.50	0.30
CARP	8.40	0.40	0.40	0.00	0.00	1.20	0.20	0.00	0.00	1.00	0.00	0.00
LING	3.57	3.29	0.00	20.57	20.29	0.00	0.29	2.14	0.00	0.14	0.00	0.00
COMMON BREAM	4.87	24.67	0.00	0.40	0.07	13.13	12.00	2.53	0.00	1.93	0.33	0.20
GROUPED SALMONIDS	11.00	1.86	0.00	10.14	10.15	0.07	0.07	0.93	0.00	0.29	0.43	0.29

Table 7.2 Co-occurrence of fish species with artefacts at Mesolithic sites: a means to assess the extent to which Mesolithic fishermen targetted particular prey species with selected fishing implements. Each correlation value was calculated by averaging the number of examples of an artefact type found (i.e. quantitative aspect) at all sites where a particular species of fish (or grouped related species) had been caught (i.e. qualitative aspect).

For example, at the 15 sites where catfish/wels remains were recovered, a total of 45 simple (av. 3.00/site) and 119 barbed points (av. 7.93/site) were also recovered. A correlation value which is higher (orange) or substantially higher (red) than others for that fish species or artefact type might be considered as evidence for a specific tool:prey relationship. It may be the case that the artefacts towards the right-hand side of the table are present in too few numbers for correlations to become apparent. Correlation values are displayed graphically in Figure 7.9.

APPENDICES

Appendix 1 Table A.1 - Radiocarbon Dates

Site	Date BP	Date Cal BC	Lab No	Material	Comments
Abri du Pape	7843±85	6650	Gx-19365		stratum 20
	8817±85	8050	Gx-19366		stratum 21
	8780±85	7950	Gx-19367		stratum 22
	8756±83	7750	Gx-19368		stratum 22.1
Advik	3620±190	1950	T-2238	wood	midden
	3730±90	2100	T-2056	marine shell	midden
	3630±80	1950	T-2058B	marine shell	midden
	4390±70	3000	T-2057	marine shell	midden
	3750±150	2150	T-233	charcoal	occupation layer
	4800±150	3600	T-197	charcoal	midden
	4350±130	2950	T-1816	wood	midden
	4150±100	2750	T-2165	bone & antler	midden
	6050±250	4900	T-232	charcoal	hearth
	4780±80	3500	T-2054	marine shell	midden
Aero	c. 6100	5000	K-5640	boat	
Aggarps mosse	8360±90	7350	OxA-2789	barbed bone point	
Altrasket	6045±105	4900	Ua-1587	charcoal	
	5920±120	4750	Ua-1588	charcoal	
	5350±90	4200	Ua-1590	charcoal	
	5725±115	4600	Ua-1589	charcoal	
Araguina-Sennola	8520±150	7550	Gif-2705	charcoal	Layer XVIII
Balltorp	8265±120	7300	Ua-0692	charcoal	
	8905±120	8100	Ua-0878	hazelnut	
	9080±110	8300	Ua-0879	hazelnut	
	8890±105	8100	Ua-0880	hazelnut	
	8855±120	8000	Ua-1467	wood	
Birmatten	6290±80	5300	OxA-2238	female	
	6970±120	5800	B-236		
	7670±120	6450	B-237		
	5310±240	4150	B-235		
	7200±600	6100	B-240		
Cabeco da Arruda	6990±110	5900			
	6970±60	5800			
	6960±70	5800			
	6780±80	5700			
	6360±80	5300			
Casteal nan Gillea I	5450±50	4250	Q-3011	charcoal	midden
	5485±50	4350	Q-3010	charcoal	midden
	6035±70	4900	Q-3009	charcoal	midden
	6120±80	5000	Q-3007	charcoal	midden
	6190±80	5150	Q-3008	charcoal	midden
	5890±70	4750	SRR-1458b	limpet - inner	midden
Casteal nan Gillea II	5460±65	4250	Q-1355	charcoal	midden
	5150±380	3950	Birm-346	charcoal	midden
	5450±140	4250	Birm-347	charcoal	midden
	5570±140	4350	Birm-348	limpet - outer	midden
	5720±140	4500	Birm-348	limpet - middle	midden
	5850±310	4750	Birm-348	limpet - inner	midden
Castillo	10310±120	10300	OxA-970	perforated baton	
Cingle Vermell	9760±160	9250	UGRA-68		
Clonava	5360±110	4200	I-4324		
Cnoc Coig	5430±130	4300	Q-1352	charcoal	midden
	5495±75	4350	Q-1351	charcoal	midden
	5535±140	4350	Q-1354	charcoal	midden
	5645±80	4450	Q-1353	charcoal	midden
	5650±60	4450	Q-3005	charcoal	pre-midden
	5675±60	4500	Q-3006	charcoal	pre-midden
	5740±65	4600	QxA-8004	human bone	midden
	5480±65	4350	QxA-8005	human bone	midden
	5495±55	4350	QxA-8014	human bone	midden
	5615±45	4400		human bone	midden
Cnoc Sligeach	5426±159	4300	BM-670	charcoal	midden
	6010±150	4850	Birm-465	Pecten inner	bbp by assoc
	5900±150	4800	Birm-465	pecten middle	midden
	5015±210	3800	Gx-1903	oyster	midden
	5775±180	4650	Gx-1904	mammal bone	midden
Cuina Turcului	10200±120	10050	Bin-804		cultural layer I
	10600±120	10100	Bin-803		cultural layer I
	8950±200	8200	Bin-802		cultural layer II
Culoz	9150±160	8200	Ly-286	charcoal	
	7360±180	6200	Ly-289	charcoal	
Daylight Rock	8655±40	7600	OxA-7685	human bone	

Table A.1 (contd)

Site	Date BP	Date Cal BC	Lab No	Material	Comments
Dudka	8750±150	7750	Gd-4305		Early Meso
	8750±70	7660	Gd-3310		Early Meso
	6800±150	5700	Gd-6769		Early Meso
	6500±80	5450	Gd-5575		Late Meso
	5750±80	4550	Gd-5942		Late Meso
	5500±70	4350	Gd-5944		Late Meso
Duruthy	11300±1130	11250	BOR-6 (TL)	III - base	Upper Magdalenian
	11150±220	11200	Ly-858	III - base	Upper Magdalenian
Dammen	8600±80	7600		shell	settlement
	8065±85	7050	Ua-5438	dog bone	settlement
	7860±85	6650		hazelnut	settlement
	7645±80	6450		fox bone	settlement
	2280±140	390		human bone	settlement
Dinslaken	9450±160	8840	HV-1414	bbp	
Druimvargie Rockshelter	7810±90	6650	OxA-1948	bbp	midden
	8340±80	7350	OxA-4608	bevel ended tool	midden
	7890±80	6800	OxA-4609	bevel ended tool	midden
Earls Barton	9240±160	6450	OxA-500	antler bp	unassociated find
Europoort	8060±250	7050	OxA-1944	barbed point	
	8780±100	7950	OxA-1945	barbed point	
Falkensteinhöhle	7820±120	6650	B-768		
	7690±120	6550	B-769		
	7540±120	6400	B-767		
Fiais	7010±100	5900	TO-705		
	6840±70	5750	TO-706		
	6260±80	5200	TO-806		
	6180±110	5150			
Friesack	8950±110	8200	OxA-600	birch bark container	
Goldcliff	6840±70	5750		charcoal, Gf East	settlement
	6770±75	5650		oak, Gf East	settlement
	6760±80	5650	OxA-6683	cut deer bone	settlement
	6430±80	5400		charcoal	settlement
	6420±80	5350	GU-2759	charcoal	settlement
	5920±80	4750		base of bog Pit 5	settlement
	5820±50	4700		base of peat	settlement
	5415±75	4300		hazelnut	settlement
Gressbakken	2490±80	660	T-1817	wood	secondary occupation layer
	3850±100	2300	T-234	charcoal	midden
	3650±150	2050	T-198	charcoal	cultural layer
	4210±90	2900	T-1917	marine shell	midden
	3660±80	2050	T-1918	marine shell	midden
	3750±70	2150	T-1916	marine shell	midden
	3930±70	2450	T-2162	seal bone	midden
	3900±110	2400	T-2161	seal bone	midden
	3600±80	1950	T-2476	marine shell	midden
	3600±90	1950	T-2060	wood	midden
	3550±40	1900	T-2240	marine shell	midden
	3640±80	2050	T-2163	marine shell	midden
	3800±70	2150	T-2475	wood	midden
	3550±70	1900	T-2059	marine shell	midden
	3600±80	1950	T-2239	wood	midden
	3880±110	2400	T-2164	heather	midden
Grotta Erica	12400±400	12400	F-40	shell	Meso
	11750±360	11850	F-38	shell	Meso
	11690±370	11700	F-39	shell	Meso
Grotta di Molara	8600±100	7600	OxA-534	human bone	
Grotta la Porta	8619±200	7600	PI-10	shell	Meso
	9810±275	9250	F-41	shell	Romanellian
Grotte de Pegourie	11290±320	11250	Ly-1390	bone	
Halsskov	6530±100	5500	K-5311	tree stump	settlement
	5840±100	4750	K-5312	tree stump	settlement
	6830±105	5750	K-5343	charcoal	settlement
	6420±100	5350	K-5344	charcoal	settlement
	6370±75	5300	K-5622	charcoal	settlement
	6130±75	5100	K-5621	charcoal	settlement
	6320±100	5300	K-5309	wood	fish screen South
	5850±100	4750	K-5310	wood	fish screen East
	c. 6070	4900		wood	dugout
Holmegaard	6280±130	5300	OxA-118	human	male
	6080±80	5700	OxA-533	human	OxA-118 repeat
	6020±100	4850	K-3559	human	male

Table A.1 (contd)

Site	Date BP	Date Cal BC	Lab No	Material	Comments
Huseby Klev	9400±75	8700	Ua-5654	charcoal	transgressed site
	8375±100	7450	Ua-5653	antler	transgressed site
	8505±80	7550	Ua-5652	hazelnut	transgressed site
	8730±90	7750	Ua-6045	hazelnut	transgressed site
	9010±90	9250	Ua-6043	vert. White-beaked dolphin	transgressed site
Kents Cavern	9150±90	8300	Ua-6411	human bones	transgressed site
	9690±140	9200	OxA-6979	Bufo calamita bone	
	8070±90	7050	OxA-1786	human maxilla	
Kopu IV	6757±51	5650	Tin-2016	charcoal	Late Mesolithic - Kunda
	6640±60	5600	TA-2533	charcoal	Late Mesolithic - Kunda
Kopu VIII	6172±50	5100	Tin-2024	hazelnut	Late Mesolithic - Kunda
Kunda	7500±280	6400	Ta-14		Meso layer
	5230±210	4050	Ta-16		mixed Meso & early Pit-Comb Ware layer
	8260±90	7300	Ua-3000		Meso layer
	8485±90	7550	Ua-3001		Meso layer
	8515±100	7550	Ua-3002		Meso layer
La Riera	8650±300	7600	GaK-2909	layer 29	Azilian
	10340±560	10400	Ly-1646	layer 23	Upper Magdalenian
	10635±120	10700	BM-1494	layer 27 top	Azilian
	10890±430	11000	GaK-6980	layer 24	Upper Magdalenian
	12270±400	12650	UCR-12750	layer 27 base	Azilian
	12360±670	12350	Ly-1645	layer 20	Lower Magdalenian
	6500±200	5500			
Leman/Ower Bank	11740±150	11850		barbed antler point	unassociated
Lepenski Vir	7360±100	6200	Bln-740b	bulk charcoal	Phase Ia House 36
	7310±100	6150	Bln-740a	bulk charcoal	Phase Ia House 36
	7300±124	6150	Z-143	bulk charcoal	Phase Ib/c House 54
	7040±100	5900	Bln-653	bulk charcoal	Phase Ib/c House 54
	6984±94	5900	Z-115	bulk charcoal	Phase Ib/c House 54
	6900±100	5750	BM-379	bulk charcoal	Phase Id House 9
	6860±100	5750	Bln-575	bulk charcoal	Phase Id House 9
	6845±100	5750	Bln-647	bulk charcoal	Phase Ie House 16
	6820±100	5700	Bln-576	bulk charcoal	Phase Ie House 51
	6800±100	5700	Bln-649	bulk charcoal	Phase Id House 1
	6630±100	5600	Bln-654	bulk charcoal	Phase II House IX
	6620±100	5550	Bln-652	bulk charcoal	Phase I House 34/43
	6560±100	5500	Bln-655	bulk charcoal	Phase II House XXXII
	7770±90	6550	OxA-5827	human bone	Phase III skeleton 31a
	7590±90	6450	OxA-5830	human bone	Phase III skeleton 44
Lindholm I	7270±90	6100	OxA-5828	human bone	Phase III skeleton 32
	7130±90	6000	OxA-5831	human bone	Phase IIIa skeleton 88
	6910±90	5750	OxA-5829	human bone	Phase III skeleton 35
	5745±145	4600	Ua-1500		
Los Azules	9450±120	8850	CSIC-260		level 3d
	9430±120	8850	CSIC-216		level 3
Lossoa's Hus	5670±60	4500	T-2472	seal bone	midden
	6120±90	5050	T-2468	seal bone	midden
	6840±100	5750	T-1914	marine shell	midden
Lough Boora	8475±75	7550	UB-2199	charcoal	hearth
	8350±70	7350	UB-2200	charcoal	hearth
	8450±70	7550	UB-2267	charcoal	hearth
	8980±360	8250	UB-2268	charcoal	hearth
MacArthur's Cave	6700±80	5600	OxA-1949	barbed antler point	midden
Magoito	9580±100	9000	GrN-11229	charcoal	midden
Marievka	7955±55	6850	OxA-6199	human bone	cemetery
	7620±160	6450	OxA-6200	human bone	cemetery
	7630±110	6450	OxA-6269	human bone	cemetery
Mazaculos	9290±440	8550	GaK-6884	III.3	Asturian
Moita do Sebastiao	7240±70	6100	TO-131	human bone	individual 22
	7180±70	6000	TO-132	human bone	individual 24
	7200±70	6100	TO-133	human bone	individual 23
	6810±70	5700			
Molara Cave	7160±80	6000			
	8600±100	7600	OxA-534	human	
Montclus	7890±170	6800	Ly-305	charcoal	
	7780±250	6650	Ly-306	bone	
	7770±410	6650	Ly-307	charcoal	
	7750±340	6550	Ly-308	bone	
	8130±240	7200	Kn-58	charcoal	
	6230±150	5200	Ly-494	female	
Monte Leone	6140±140	5100	Ly-304	female	
	8225±80	7300	ETH-8305	<i>Prolagus</i> bones	settlement

Table A.1 (contd)

Site	Date BP	Date Cal BC	Lab No	Material	Comments
Morton A	8050±255	7050			
	7330±200	6550			
	6790±150	5700			
	6730±180	5650			
	6450±80	5400			
	6400±115	5350			
	6300±150	5300			
Morton B	6115±110	5050			midden
	6382±120	5350			midden
	6147±90	5100			midden
	5180±70	4000	OxA-4610	bevel ended tool	midden
	5475±60	4350	OxA-4611	bevel ended tool	midden
	5790±80	4700	OxA-4612	bevel ended tool	midden
Mullerup - Sarauw's Island	5600±120	6710	K-1609		earliest occupation layer
Musholm Bay	7490±115	6400	K-5916	alder stump	shoreline
	7410±115	6200	K-5915	alder stump	shoreline
	8070±115	7050	K-5012	alder stump	shoreline
	7480±70	6400	AAR-1573	hazel nut	settlement
	7320±70	6150	AAR-1572	hazel charcoal	settlement
Narva	6800±180	5700	Ta-53		
	6200±230	5150	Ta-41		
	6700±300	5650	Ta-25		
	6400±190	5350	Ta-52		
	5900±250	4800	Ta-40		
	5230±120	4050	Ta-17		
	5060±200	3850	Ta-33		
	4550±250	3350	Ta-7		
Nekselo	c. 5440	4300		hazel pole	fish screen
	c. 5560	4350		hazel pole	fish screen
Newferry	7350±145	6250	UB-888	organic mud	Zone 9
	7400±140	6250	UB-487	wood	Zone 9
	6800±195	5700	UB-641	wood	Zone 8
	6600±115	5550	UB-496	charcoal	Zone 7
	6250±110	5250	UB-517	charcoal	Zone 7
	6120±60	5000	UB-516	charcoal	Zone 7
	6120±115	5050	UB-887	charcoal	Zone 7
	6100±60	4950	UB-886	charcoal	Zone 7
	8000±125	6950	UB-637	charcoal	Zone 7
	6150±120	5150	UB-885	charcoal	Zone 7
	6250±105	5250	UB-514	charcoal	Zone 6
	5750±60	4650	UB-890	charcoal	Zone 6
	5800±170	4650	UB-505	charcoal	Zone 5
	5675±185	4500	UB-653	charcoal	Zone 5
	5410±100	4250	UB-490	charcoal	Zone 4
	4675±90	3450	UB-498	charcoal	Zone 3
	4980±90	3750	UB-630	charcoal	
Nizhnee Veret'e	8750±70	7750	LE-1472		
	8560±120	7600	GIN-2452-U		
	8520±120	7550	GIN-2452-D		
Noyen-sur-Seine	9130±100	8300	GIF-7286	bark	
	8020±100	7050	GIF-6632	wood	
	8000±100	6950	GIF-6633	fish-trap	
	7990±100	6950	GIF-6631	wood	
	7960±100	6850	GIF-6559	canoe	
	7400±80	6250	GIF-6989	board?	
	7300±80	6150	GIF-7126	wood	
	7040±80	5900	GIF-7125	bark	
	6240±70	5200	GIF-6991	wood	
	5800±80	4700	GIF-6043	pile?	
	5400±70	4250	GIF-6990	wood	
Nyelv Nedre Vest	4290±80	2900	T-2474	shell	House 1
	4520±90	3250	T-2055	shell	House 1
	4190±80	2800	T-1915	shell	House 3
	4430±80	3050	T-2053	shell	House 30 - Area 4
	4730±90	3500	TS-7702ab	charcoal	hearth - F2 Area 2
	2400±70	400	TS-7703ae	charcoal	hearth - F2 Area 2
	4500±70	3200	Ts-7706s	charcoal	hearth - F2 Area 10
	4500±240	3200	Ts-7705iv	charcoal	midden - F8 Area 11
	4980±180	3750	Ts-	charcoal	midden - F9 Area 11
	4330±50	2950		human bone	burial - F12 Area 11
	4370±100	2950	Ts-7705iae	charcoal	midden - F13 Area 11
	4720±180	3500	Ts-7705is	charcoal	midden - F14 Area 11

Table A.1 (contd)

Site	Date BP	Date Cal BC	Lab No	Material	Comments
Odmut	6250±100	5200	SI-2220		Odmut lb
	6950±85	5750	SI-2221		Odmut lb
	7800±100	6650	SI-2224		Odmut lb/la
	8900±85	8100	SI-2225		Odmut la
	6975±70	5850	SI-2226		Odmut la
	6175±85	5150	SI-2227		Odmut la
	8150±80	7200	SI-2228		Odmut la
Oleni Ostrov	7280±80	6150	OxA-1665	human bone	burial - 57
	7330±90	6200	OxA-1667	human bone	burial - 80
	7560±90	6450	OxA-1668	human bone	burial - 80
	7560±90	6450	OxA-1669	human bone	burial - 80
	7280±90	6150	OxA-2124	human bone	burial - 89
	7510±90	6400	OxA-2125	human bone	burial - 85
	7750±110	6550	OxA-1973	human bone	burial - 108
Olmanas	630±235				
	7985±220	6950			
	7810±135	6650			
	7440±160	6300			
Padina	7738±51	6550	BM-1143	mature male site 2	
	8797±83	7950	BM-1144	senile female site 7	
	9331±58	8610	BM-1146	mature male site 12	
	9198±102	8400	BM-1147	adult male site 14	
	9292±148	8550	BM-1404	infant site 39	
	8138±121	7200	BM-1403	Ursus Ursus	
Pesse	7450±275	6300	GRO-486		
Pietracorbara	7840±310	6650	LGQ-507		
	6920±300	5750	LGQ-508		
Porth-y-Waen	11390±120	11450	OxA-1946	barbed antler point	
Pont D'Ambon	10350±190	10400	GIF-3368		
	9830±130	9250	GIF-2570		
Priory Midden	5470±50	4300	Q-3004	charcoal	midden
	5510±50	4350	Q-3003	charcoal	midden
	5717±50	4500	Q-3002	charcoal	midden
	5825±50	4750	Q-3000	charcoal	midden
	5870±50	4750	Q-3001	charcoal	midden
Porth-y-waen	11390±120	11450	OxA-1946	barbed antler point	
Pulli	8325±75	7350	Ta-175		
	9575±120	9000	Ta-176		
	9600±120	9000	Ta-245		
	9285±120	8550	Ta-284		
Ringkloster	5610±110	4400	K-1652	Charcoal	Ceramic Ert
	5490±100	4350	K-1653	Charcoal	Ceramic Ert
	5320±100	4150	K-1654	Charcoal	Ceramic Ert
	5500±110	4350	K-1765	Charcoal	Ceramic Ert
	5230±70	4100	K-4132	Dog bone	Ceramic Ert
	5420±210	4300	K-4133	Dog bone	Ceramic Ert
	5820±95	4700	K-4367	Charcoal	Ceramic Ert
	5410±95	4250	K-4368	Charcoal	Ceramic Ert
	5200±70	4000	K-4369	Charcoal	Ceramic Ert
	5120±70	3950	K-4370	Charcoal	Ceramic Ert
	5080±70	3900	K-4371	Charcoal	Ceramic Ert
	4800±65	3600	K-4372	Charcoal	Neo
	5180±100	4000	K-6108	Charcoal	Ceramic Ert
Riparo Blanc	8565±80	7600	R-341	charcoal	
Risga	6000±90	4850	OxA-2023	antler mattock	
	5875±65	4750	OxA-3737	bevel ended implement	
Romagnano	9830±90	9300	R-1147	charcoal	base deposits
	9580±250	9000	R-1146A	charcoal	Sauveterian
	9490±60	8900	R-1146B	charcoal	Sauveterian
	9420±60	8700	R-1146	charcoal	Sauveterian
	9200±60	8400	R-1145	charcoal	Sauveterian
	9100±90	8300	R-1144	charcoal	Sauveterian
	9090±90	8300	R-1143	charcoal	Sauveterian
	8740±90	7750	R-1142	charcoal	Sauveterian
	8590±90	7600	R-1141	charcoal	Sauveterian
	8560±70	7600	R-1140	charcoal	Sauveterian
	8220±80	7200	R-1139	charcoal	Sauveterian
	7850±60	6650	R-1137	charcoal	Castelnovian
	7800±80	6650	R-1137B	charcoal	Castelnovian
	7500±160	6400	R-1137A	charcoal	Castelnovian
Ronneholms mosse	8610±90	7600	OxA-2792	barbed bone point	
Rotterdam - Bergschenhoek	5415±60	4250	GrN-7764		

Table A.1 (contd)

Site	Date BP	Date Cal BC	Lab No	Material	Comments
Rottjarnslid	5600±140	4400			
	5570±300	4350			
	5455±300	4300			
Schela Cladovei	8150±80	7200	GrN-16991	bulk charcoal	hearth = SCII
	7580±90	6450	GrN-16992	bulk charcoal	hearth = SCII
	8570±105	7600	OxA-4384	human bone	Area III skeleton M52
	8550±105	7600	OxA-4379	human bone	Area III skeleton M43
	8510±105	7550	OxA-4385	human bone	Area III skeleton M55
	8490±110	7550	OxA-4382	human bone	Area III skeleton M49
	8460±110	7550	OxA-4380	human bone	Area III skeleton M46
	8415±100	7450	OxA-4378	human bone	Area III skeleton M42
	8400±115	7450	OxA-4381	human bone	Area III skeleton M48
	8290±105	7350	OxA-4383	human bone	Area III skeleton M50
Shewalton	5840±80	4750	OxA-1947	barbed antler point	unassociated
Spiginas	7470±60	6300	GIN-5571	human bone	cemetery
	7780±65	6650	OxA-5925	human bone	cemetery
Sproughton I	10910±150	10750	OxA-517	antler bp	
Sproughton II	10700±160	10900	OxA-518	antler bp	
Star Carr	9557±210	8950	Q-14	wood	brushwood platform: bbps by assoc
	9488±350	8850	C-353		
	9700±160	9200	OxA-1176	worked antler	1985 trench
	9500±120	8900	OxA-1154	worked antler	1985 trench
	9670±120	9150	CAR-928	charcoal	under wooden platform, 1985 exc
	9240±90	8450	CAR-926	wood	wooden platform
	8940±90	8200	OxA-4377	wood	1985 exc
	9385±115	8700	OxA-4376	wood	1985 exc
	9390±70	8700	OxA-3342	plant detritus	1985 exc
	9420±70	8700	OxA-3343	plant detritus	1985 exc
	9360±70	8600	OxA-3344	plant detritus	1985 exc
	9580±70	9000	OxA-3345	charcoal - reed	1985 exc
	9560±70	8950	OxA-3346	wood	1985 exc
	9680±70	9200	OxA-3347	wood	1985 exc
	9700±70	9200	OxA-3348	charcoal - reed	1985 exc
	9640±70	9150	OxA-3349	wood	1985 exc
	9500±70	8900	OxA-3350	aspen/birch fruits, bud & catkin scales	1985 exc
	9630±100	9050	OxA-3351	aspen/birch fruits, bud & catkin scales	1985 exc
	9350±90	8600	OxA-2343	resin cake	
Stellmoor	7830±80	6650	OxA-2873	beaver mandible	
	9220±90	8400	OxA-2874	beaver vertebrae	
	9680±90	9200	OxA-2875	red fox	
Thatcham	8775±160	7900	Q-651		
	8450±160	7550	Q-652		
	8700±160	7700	Q-650		
	7300±180	6150	BM		
Thatcham III	9200±170	8400	Q-659		
	9350±90	8600	OxA-2848	resin cake	
	5100±350	3950	OxA-1201	beaver femur	
	6550±130	5500	OxA-940	pig humerus	
Thatcham IV	9760±120	9250	OxA-732	worked antler beam	
	9490±110	8900	OxA-894	burnt elk antler	
Thatcham V	9430±100	8850	OxA-5190	red deer calcaneum	
	9510±90	8900	OxA-5191	red deer phalange	
	9400±80	8700	OxA-5192	charred hazelnut	
Tybrind Vig	4540±95	3300	K-3557	dugout	
	4650±95	3400	K-4149	dugout	
	c. 6440	5400	K-3558	female	
Uzzo Cave	10070±90	9800	P-2736	charcoal	Meso
	9300±100	8550	P-2558	charcoal	Meso
	9180±100	8400	P-2557	charcoal	Meso
	9030±100	8250	P-2556	charcoal	Meso
	8330±80	7350	P-2735	charcoal	Meso
	7190±70	6100	P-2734	charcoal	Epi Palaeo/Early Neo
Vidigal	6030±180	4900	Gx-14557		midden
	6640±90	5600	Ly-4695		bone collagen
Vis I	8080±80	7050	LE-76		
	7090±80	5950	LE-685		
Viste	7420±150	6250	T-3351	human bone collagen	

Table A.1 (contd)

Site	Date BP	Date Cal BC	Lab No	Material	Comments
Vlasac	7440±60	6300	BIn-1954	bulk charcoal	Phase III
	7475±60	6400	BIn-1168	bulk charcoal	Phase II (end)
	7610±60	6450	BIn-1052	bulk charcoal	Phase II
	7559±93	6400	Z-267	bulk charcoal	Phase II
	7665±60	6450	BIn-1169	bulk charcoal	Phase II
	7935±60	6850	BIn-1050	bulk charcoal	Phase II
	7925±77	6850	LJ-2047a	bulk charcoal	Phase II
	7930±77	6850	LJ-2047b	bulk charcoal	Phase II (beginning)
	7830±100	6650	BIn-1171	bulk charcoal	Phase Ib (end)
	7840±100	6650	BIn-1170	bulk charcoal	Phase Ib
	6865±100	5750	BIn-1053	bulk charcoal	Phase Ib
	6805±100	5650	BIn-1014	bulk charcoal	
	6905±100	5750	BIn-1951	bulk charcoal	Phase Ib
	6790±100	5650	BIn-1051a	bulk charcoal	
	7000±90	5900	Z-262	bulk charcoal	Phase Ib
	10240±120	10300	OxA-5824	human bone	Phase I skeleton 72
	10140±160	10000	OxA-5825	human bone	
	8760±110	7750	OxA-5822	human bone	Phase I skeleton 51a
	8200±90	7200	OxA-5827	human bone	Phase III skeleton 83
	8170±100	7200	OxA-5823	human bone	Phase I skeleton 54
	8000±100	6950	OxA-5826	human bone	Phase III skeleton 24
Waltham	9790±100	9250	OxA-1427	antler bp	
Wandsworth	9050±85	8250	OxA-3736	barbed antler point	
Zutphen	9410±40	8700	GrN-22536	charred wood	site M
	7455±25	6300	GrN-25696	Quercus with cut marks	site M
	9390±30	8700	GrN-25698	charred wood	site M
	9380±60	8700	GrA-16811	red deer bone	site M
	7510±60	6400	GrA-16813	red deer bone	site M
	8870±60	8000	GrA-16814	mammal bone	site M
	9240±60	8450	GrA-16815	roe deer bone	site M
	8880±60	8100	GrA-16817	calcine bone	site M
	8720±60	7750	GrA-16797	bone	site M
	9090±120	8300	GrA-12904	bone	site M
	7480±50	6400	GrA-17160	charcoal	site M
	8240±70	7300	Ua-3634	Human - grave 305	bone point dated by assoc.
	6775±55	5700	Ua-3635	Human - grave 39	
	6825±60	5750	Ua-3636	Human - grave 57	s b p (spearhead) by assoc.
Zvejnieki	6460±60	5400	Ua-3637	Human - grave 85	
	6900±65	5750	Ua-3638	Human - grave 2	
	5280±55	4100	Ua-3639	Human - grave 124	
	2370±65	400	Ua-3640	Human - grave 142	
	5230±65	4100	Ua-3641	Human - grave 185	
	5690±45	4500	Ua-3642	Human - grave 300	
	5285±50	4100	Ua-3643	Human - grave 206	
	7730±70	6550	Ua-3644	Human - grave 154	
	5100±65	3950	Ua-3645	Human - grave 282	
	7370±90	6200	TA-857		earliest cultural layer
Zvidge	4370±80	3000	TA-675		latest cultural layer

Appendix 2

Bone Point Typologies

The point typologies (used in Table 6.4) devised for Mesolithic bone points by Verhart (1990) and J G D Clark (1936) are described below and illustrated in Figures A.1 and A.2.

A.2.1: *Bone point typology — after Verhart (1990).*

01. Plain points.

- 01.00 general and fragments
- 01.01 small plain points, $L:W \leq 5:1$
- 01.02 big plain points, $L:W > 5:1$
- 01.03 big plain points with perforation at the base

02. Notched points

- 02.00 general and fragments
- 02.01 points with small notches
- 02.02 points with triangular notches
- 02.03 points with spaced triangular notches

03. Points with fine barbs

- 03.00 general and fragments
- 03.01 points with smoothly merged barbs
- 03.02 points with spaced barbs
- 03.03 points with oblique carved barbs

04. Points with medium barbs

- 04.00 general and fragments
- 04.01 points with a single medium barb
- 04.02 points with medium barbs
- 04.03 points with rectangular medium barbs
- 04.04 points with medium barbs at either end

05. Points with big barbs

- 05.00 general and indeterminable fragments
- 05.01 uniserial fragments

- 05.02 biserial fragments
- 05.03 terse point with big barbs, without perforation
- 05.04 terse point with big barbs and perforation
- 05.05 long point with big barbs
- 05.06 points with big spaced barbs, perforation may be present or absent
- 05.07 points with big pointed barbs
- 05.08 points with long deep carved barbs
- 05.09 biserial roe deer point with big barbs
- 05.10 biserial points with < 4 barbs, without perforation
- 05.11 biserial points with < 4 barbs, with perforation
- 05.12 biserial points with > 4 barbs, without perforation
- 05.13 biserial points with > 4 barbs, with perforation

- 06. Points with protruding barbs
 - 06.00 general and indeterminable fragments
 - 06.01 uniserial fragments
 - 06.02 biserial fragments
 - 06.03 biserial points with alternating barbs
 - 06.04 biserial points with coupled barbs
 - 06.05 points with straight barbs
 - 06.06 points with curved barbs, with and without perforation
 - 06.07 points with barbs and binding barb/notch

- 07. Slotted points
 - 07.00 general
 - 07.01 fragments with two grooves
 - 07.02 point with two grooves
 - 07.03 points with two grooves and one notched base
 - 07.04 points with two grooves and notched tip and base
 - 07.05 points with one groove or fragments

- 08. Tanged points
 - 08.00 general and fragments
 - 08.01 points with conical tip
 - 08.02 points with broad flat tip
 - 08.03 points with one barb
 - 08.04 points with triangular barb
 - 08.05 points with big rectangular barb
 - 08.06 points with triangular cross section

08.07 points with fine notched tip

19. Miscellaneous

19.00 general and fragments

20. Daggers

20.00 general and fragments

20.01 slotted daggers

20.02 daggers made of metapodials

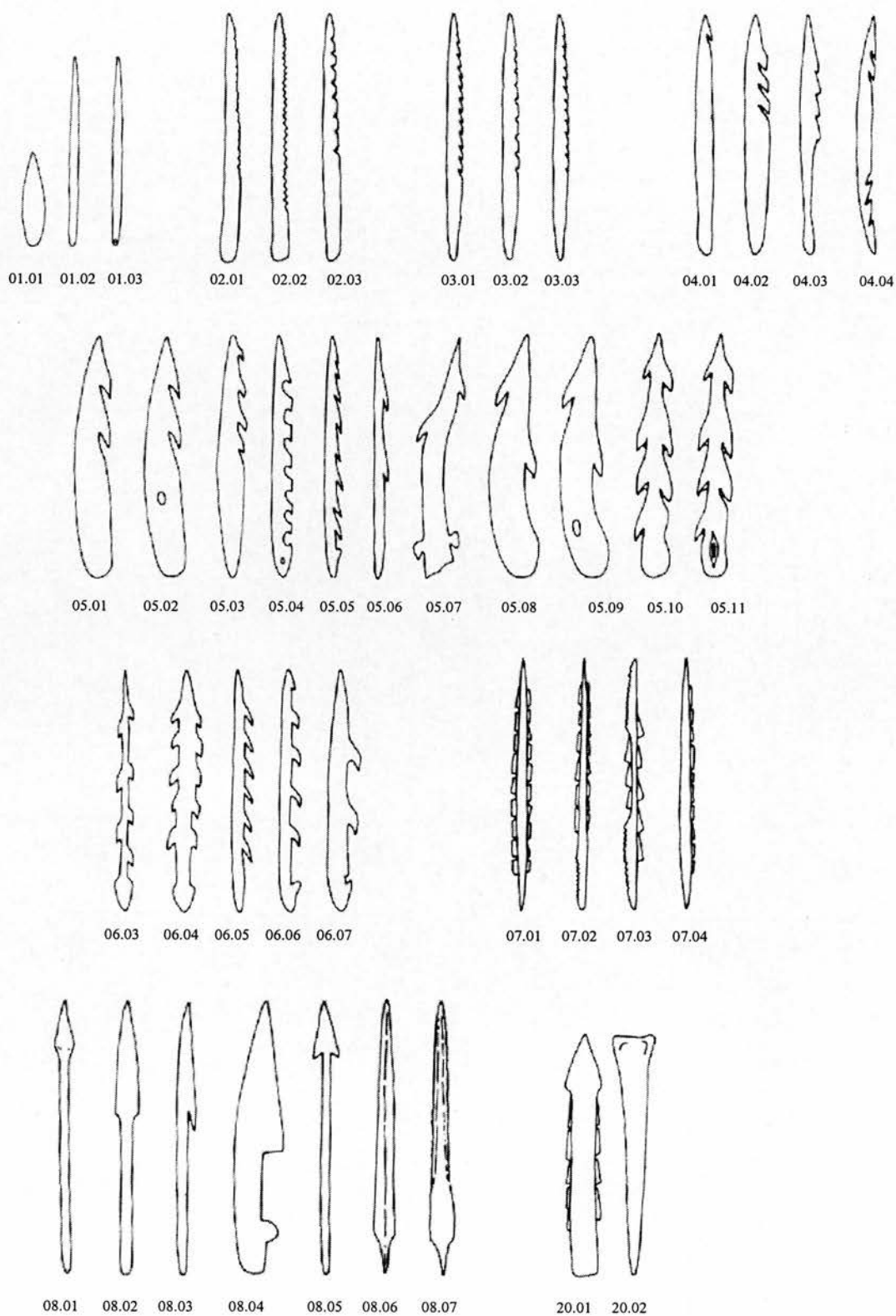


Figure A1 Barbed point typology (after Verhart 1990)

See Appendix A.1.1 for details.

A.2.2: *Bone point typology — after J G D Clark (1936).*

1. Plain points of circular section
2. Notched points. Simple notches. Duvensee type.
3. Notched points. Triangular notches, leaving triangular teeth. Istaby type.
4. Notched points. Triangular notches, spaced apart. Dobbertin type.
5. Single-barbed points.
6. Barbed points. Finely toothed by oblique notches. Kunda type.
7. Barbed points. With convex barbs. Mullerup type.
8. Barbed points. With convex angular barbs. Pritzerber type.
9. Barbed points. With large recurved barbs. Törning type.
10. Barbed points. With pointed but slightly convex barbs. Gohre-Worle type.
11. Barbed points. With sharp triangular barbs. Sorbeheinen type.
12. Barbed points. Single and double barbed with stem of circular section. Havel type.
13. Tanged point of triangular section.
14. Barbed leister prong, bowed but with straight basal portion.
15. Bow-shaped point barbed at either end.
16. Conical tipped point.
17. Lanceolate points. Plain. Pentekinnen type.
18. Lanceolate points. Single barbed. Lohusu type.
19. Lanceolate points. Finely toothed toward the base. Pernau type.
20. Flat tanged point, finely notched on both edges.
21. Slotted points with flint inserts. Plain and narrow. Stora Dode type.
22. Slotted points with flint inserts. Plain and narrow. Indented near lower end. Sværdborg type.
23. Slotted points with flint inserts. Broad and flat. Copenhagen type.
24. Slotted points with flint inserts. Broad and flat. Søholm type.
25. Slotted points with flint inserts. Narrow type finely barbed on one side. Bussjö type.

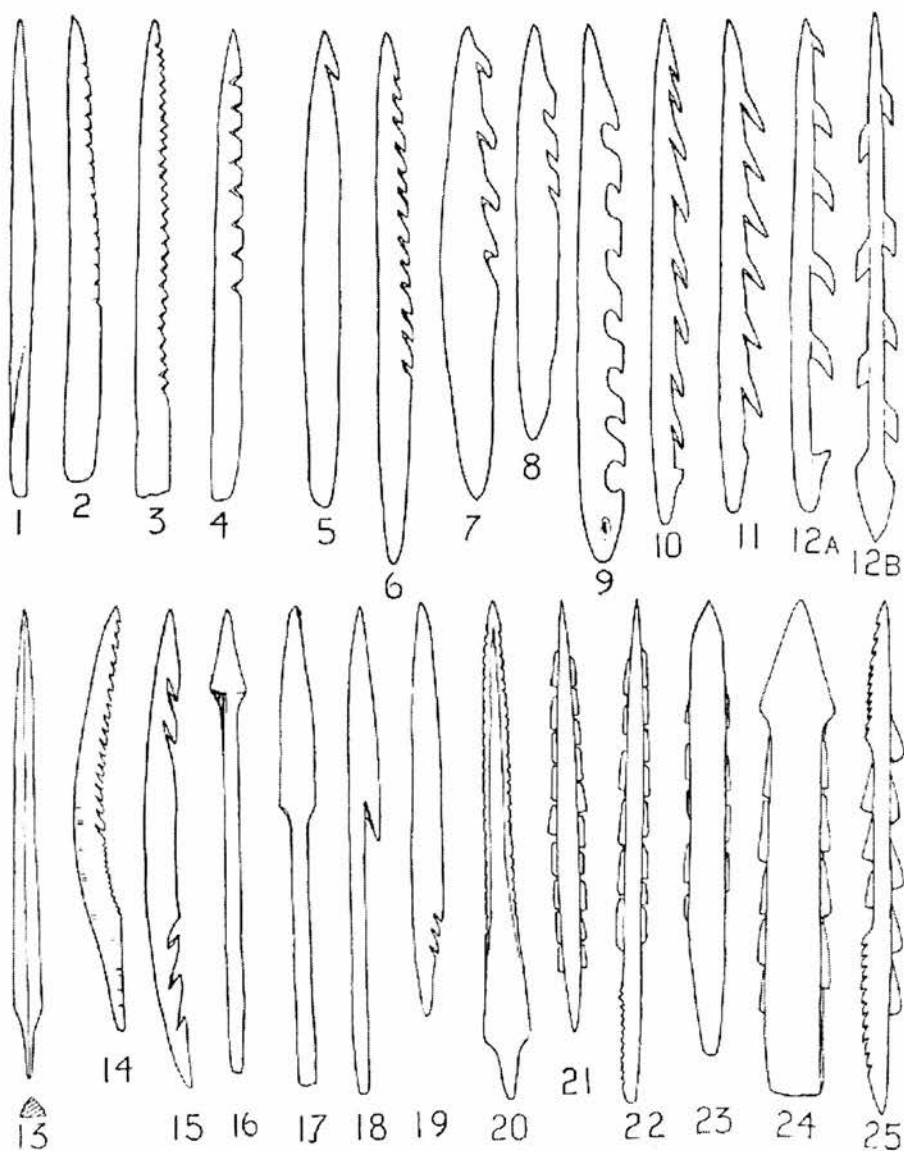


Figure A.2 Barbed point typology (after J G D Clark 1936)

See Appendix A.1.2 for details.

GLOSSARIES

Glossary of Fish Species

Common Name	Latin Name
Allis shad	<i>Alosa alosa</i>
Atlantic horse mackerel	<i>Trachurus trachurus</i>
Atlantic sturgeon	<i>Acipenser oxyrinchus</i>
Asp	<i>Aspius aspius</i>
Ballan wrasse	<i>Labrus bergylta</i>
Barbel	<i>Barbus barbus</i>
Beluga	<i>Huso huso</i>
Black goby	<i>Gobius niger</i>
Black Sea roach	<i>Rutilus frisii</i>
Black seabream	<i>Spondylusoma cantharus</i>
Blenny	Bleniidae
Bluefin tuna	<i>Thunnus thynnus</i>
Bogue	<i>Boops boops</i>
Bonito	<i>Sarda sarda</i>
Bream	<i>Abramis brama</i>
Brill	<i>Scopthalmus rhombus</i>
Bullrout	<i>Myoxocephalus scorpius</i>
Carp	<i>Cyprinus carpio</i>
Catfish (European)	<i>Silurus glanis</i>
Chinook	<i>Oncorhynchus tshawytscha</i>
Chum	<i>Oncorhynchus keta</i>
Chub	<i>Leuciscus cephalus</i>
Cod (Atlantic)	<i>Gadus morhua</i>
Cod (Pacific)	<i>Gadus macrocephalus</i>
Coho	<i>Oncorhynchus kisutch</i>
Common seabream	<i>Diplodus vulgaris</i>
Common stingray	<i>Dasyatis pastinaca</i>
Conger	<i>Conger conger</i>
Couch's seabream	<i>Pagrus pagrus</i>
Crucian carp	<i>Carassius carassius</i>
Cuckoo wrasse	<i>Labrus mixtus</i>
Cyprinids	Cyprinidae

Common Name	Latin Name
Dab	<i>Limanda limanda</i>
Dace	<i>Leuciscus leuciscus</i>
Dentex	<i>Dentex dentex</i>
Dragonet	<i>Callionymus lyra</i>
Drum	Sciaenidae
Dusky perch	<i>Epinephelus guaza</i>
Eagle ray	<i>Myliobatis aquila</i>
Eel	<i>Anguilla anguilla</i>
Fifteen-spined stickleback	<i>Spinachia spinachia</i>
Flatfish	Pleuronectidae
Flounder	<i>Platichthys flesus</i>
Four-horned sculpin	<i>Trigloporus quadricornis</i>
Gadids	Gadidae
Garfish	<i>Belone belone</i>
Gilthead	<i>Sparus auratus</i>
Gobiids	Gobiidae
Golden redfish	<i>Sebastes marinus</i>
Grayling	<i>Thymallus thymallus</i>
Greater pipefish	<i>Syngnathus acus</i>
Greater weever	<i>Trachinus draco</i>
Grey gurnard	<i>Chelidonichthys gurnardus</i>
Grey mullet	Mugilidae
Grouper	<i>Epinephelus</i> spp.
Gurnard	Triglidae
Haddock (Atlantic)	<i>Melanogrammus aeglefinus</i>
Hake	<i>Merluccius merluccius</i>
Halibut (Atlantic)	<i>Hippoglossus hippoglossus</i>
Halibut (Pacific)	<i>Hippoglossus stenolepis</i>
Herring	<i>Clupea harengus</i>
Huchen	<i>Hucho hucho</i>
Ide/Orfe	<i>Leuciscus idus</i>
Lemon sole	<i>Microstomus kitt</i>
Ling	<i>Molva molva</i>
Long rough dab	<i>Hippoglossoides platessoides</i>
Mackerel	<i>Scomber scombrus</i>
Meagre	<i>Argyrosomus regius</i>

Common Name

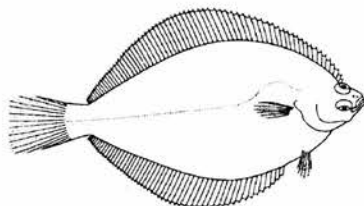
Latin Name

Mediterranean moray	<i>Muraena helena</i>
Minnow	<i>Phoxinus phoxinus</i>
Moon fish	<i>Holacanthus ciliaris</i>
Perch	<i>Perca fluviatilis</i>
Perch family	Percidae
Pike	<i>Esox lucius</i>
Pike-Perch	<i>Stizostedion lucioperca</i>
Pilchard	<i>Sardina pilchardus</i>
Pink salmon	<i>Oncorhynchus gorbuscha</i>
Pipefish	Syngnathidae
Plaice	<i>Pleuronectes platessa</i>
Pollack	<i>Pollachius pollachius</i>
Porbeagle	<i>Lamna nasus</i>
Ray	Rajidae
Red scorpionfish	<i>Scorpaena scrofa</i>
Redfish	<i>Sebastes</i> spp.
Roach	<i>Rutilus rutilus</i>
Rudd	<i>Scardinius erythrophthalmus</i>
Ruffe	<i>Gymnocephalus cernua</i>
Russian sturgeon	<i>Acipenser gueldenstaedii</i>
Saithe	<i>Pollachius virens</i>
Salema	<i>Sarpa salpa</i>
Salmon (Atlantic)	<i>Salmo salar</i>
Salmon (Pacific)	<i>Oncorhynchus</i> spp.
Salmonid	Salmonidae
Sandeel	Ammodytidae
Sardine	<i>Sardinus</i> spp.
Sea bass	<i>Dicentrarchus labrax</i>
Seabream	Sparidae
Shad	<i>Alosa</i> spp.
Shanny	<i>Lipophrys pholis</i>
Shark	Elasmobranchii
Silver bream	<i>Abramis bjoerkna</i>
Skate	<i>Raja batis</i>
Smelt	<i>Osmerus eperlanus</i>
Smelt/Eulachon	<i>Osmerus</i> spp.

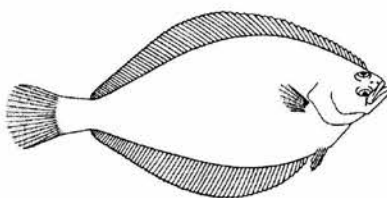
Common Name	Latin Name
Smoothhound	<i>Mustelus mustelus</i>
Sockeye	<i>Oncorhynchus nerka</i>
Sole	<i>Solea solea</i>
Spanish/Pacific mackerel	<i>Scomber japonicus</i>
Spanish seabream	<i>Pagellus acarne</i>
Sprat	<i>Sprattus sprattus</i>
Spurdog /Dogfish	<i>Squalus acanthias</i>
Stellate sturgeon	<i>Acipenser stellatus</i>
Sterlet	<i>Acipenser ruthenus</i>
Stickleback	Gasterosteidae
Stingray	Dasyatidae
Sturgeon	<i>Acipenser sturio</i>
Sturgeon family	Acipenseridae
Swordfish	<i>Xiphias gladius</i>
Tench	<i>Tinca tinca</i>
Thornback ray	<i>Raja clavata</i>
Three-spined stickleback	<i>Gasterosteus aculeatus</i>
Tope	<i>Galeorhinus galeus</i>
Torsk	<i>Brosme brosme</i>
Trout (Atlantic)	<i>Salmo trutta</i>
Trout (Pacific)	<i>Oncorhynchus mykiss</i>
Tub gurnard	<i>Chelidonichthys lucerna</i>
Tuna	Scombridae
Turbot	<i>Scophthalmus maximus</i>
Viviparous Blenny	<i>Zoarces viviparus</i>
Whitefish (European)	<i>Coregonus</i> spp.
Whitefish (Great Lake)	<i>Coregonus clupeaformis</i>
Whiting	<i>Merlangius merlangus</i>
Wolffish	<i>Anarhichas lupus</i>
Wrasse	Labridae
Zander	<i>Stizostedion lucioperca</i>

See Table 5.2 for details of the biology of fish recovered from European Mesolithic sites.

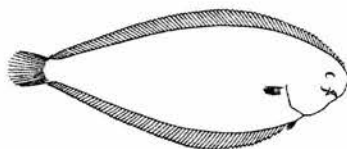
Illustrations of Fish Species



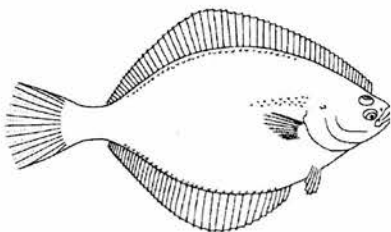
Dab



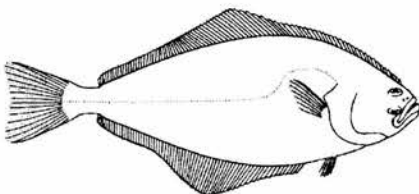
Long rough dab



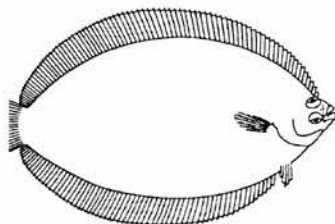
Sole



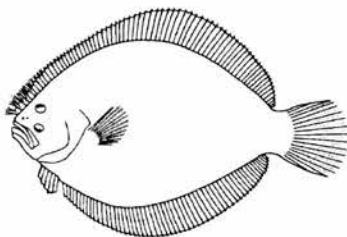
Flounder



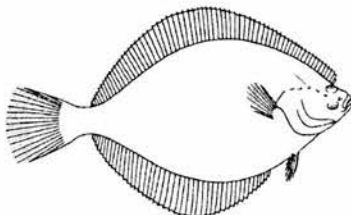
Halibut



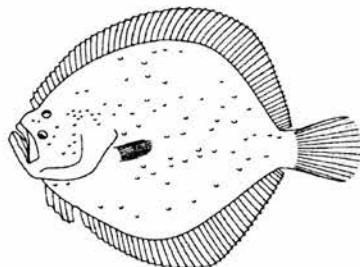
Lemon sole



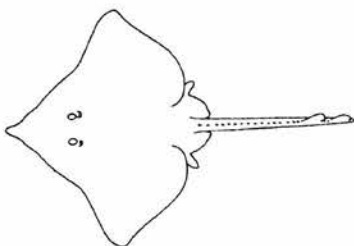
Brill



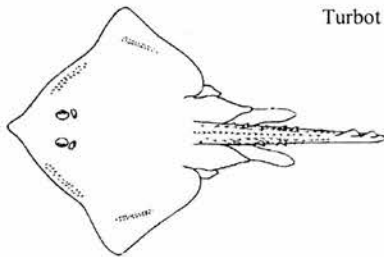
Plaice



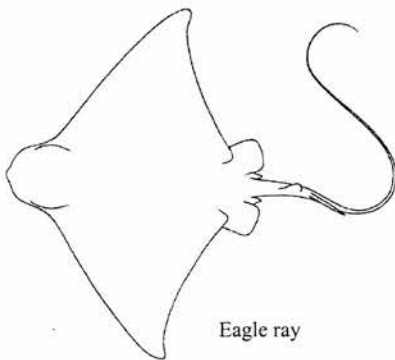
Turbot



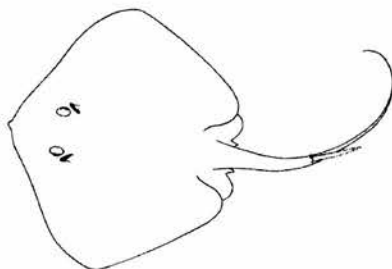
Skate



Thornback ray



Eagle ray

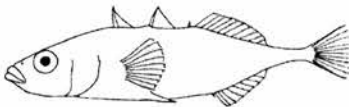


Stingray

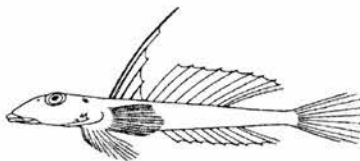
Illustrations of Fish Species (contd)



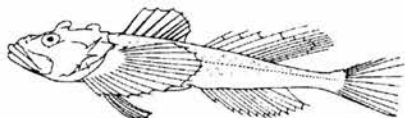
Fifteen-spined stickleback



Three-spined stickleback



Dragonet



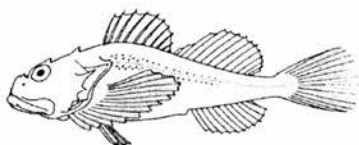
Four-horned sculpin



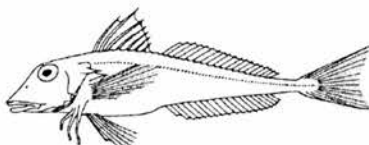
Black goby



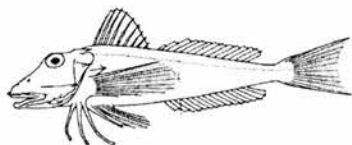
Greater weever



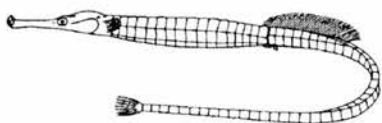
Bullrout



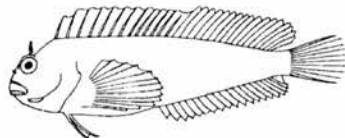
Grey gurnard



Tub gurnard



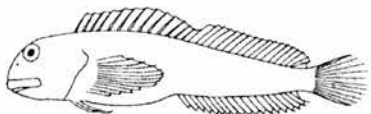
Greater pipefish



Blenny



Viviparous blenny



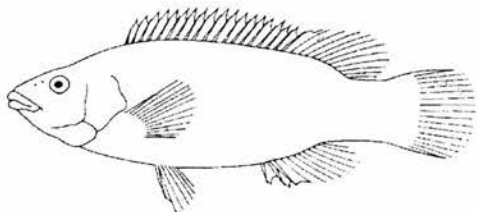
Shanny



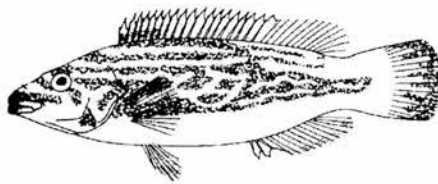
Sandeel



Sprat



Ballan wrasse

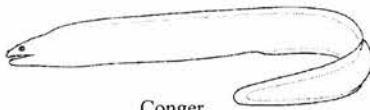


Cuckoo wrasse

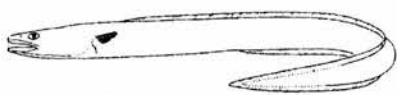
Illustrations of Fish Species (contd)



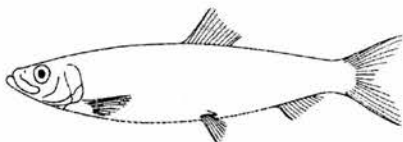
Eel



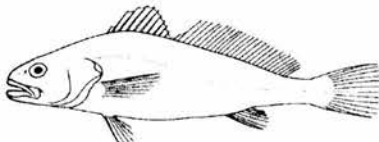
Conger



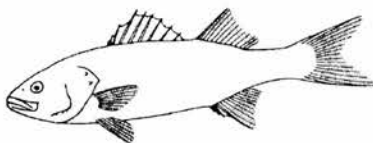
Mediterranean moray



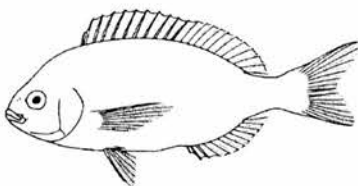
Herring



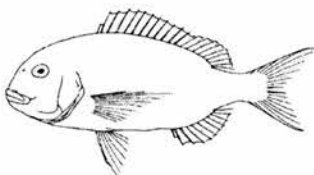
Meagre



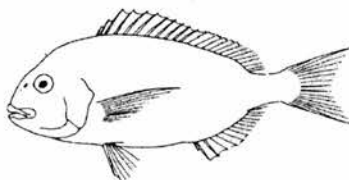
European sea bass



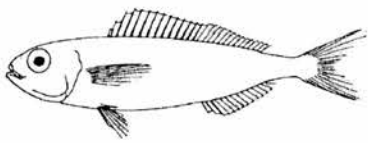
Black seabream



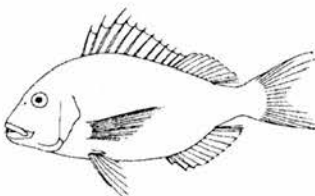
Couch's seabream



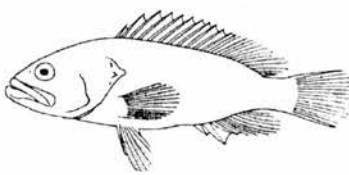
Spanish seabream



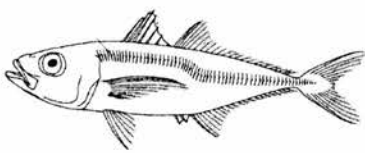
Bogue



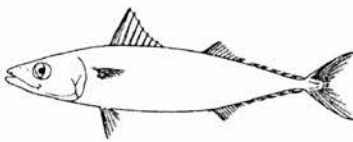
Dentex



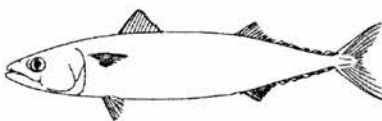
Dusky perch



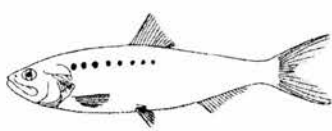
Atlantic horse mackerel



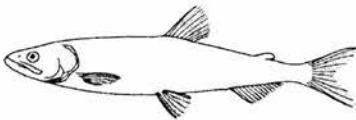
Spanish mackerel



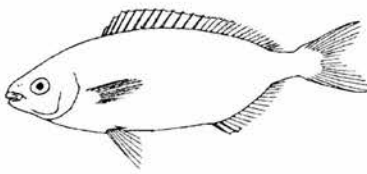
Mackerel



Shad

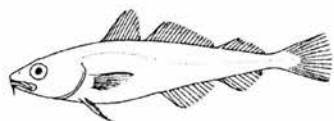


Smelt

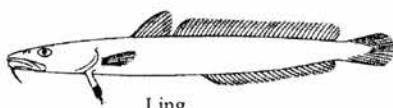


Salema

Illustrations of Fish Species (contd)



Cod



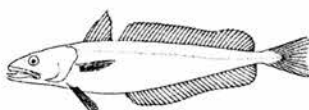
Ling



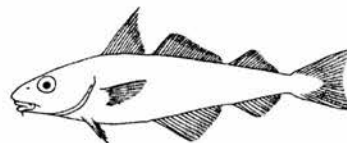
Wolf-fish



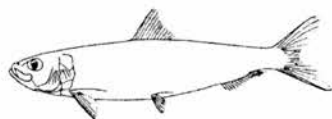
Belone



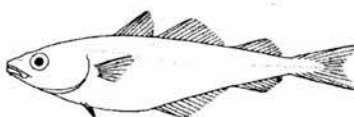
Hake



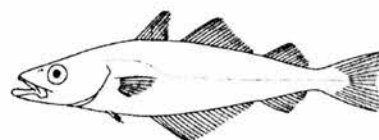
Haddock



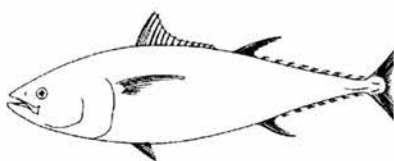
Pilchard



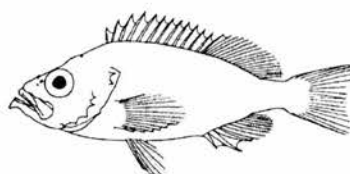
Saithe



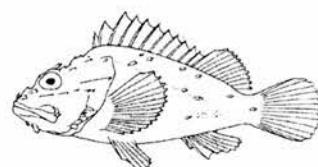
Pollack



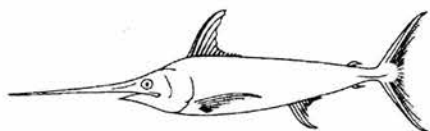
Bluefin



Redfish



Scorpionfish



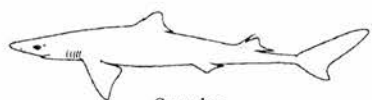
Swordfish



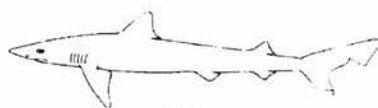
Torsk



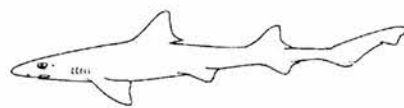
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Spurdog

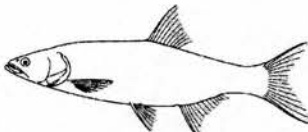


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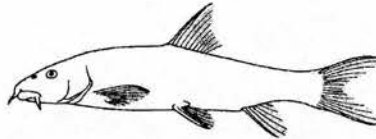


Smoothhound

Illustrations of Fish Species (contd)



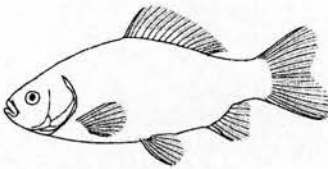
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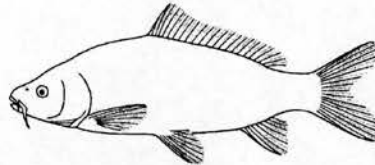
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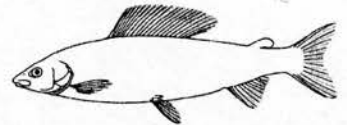
Minnow



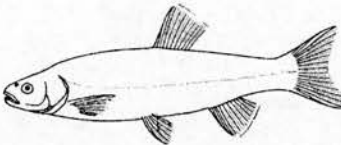
Crucian carp



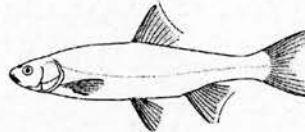
Carp



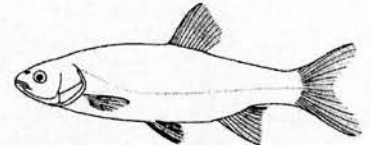
Grayling



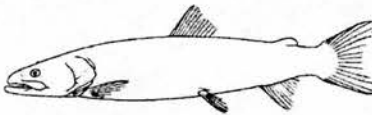
Chub



Dace



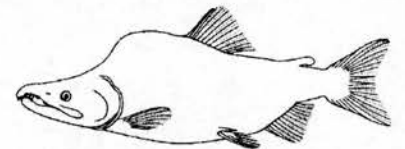
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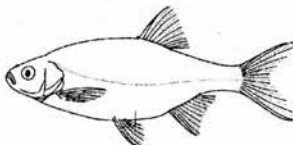
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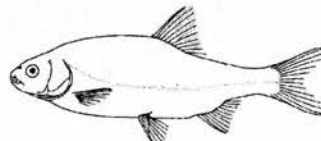
Trout



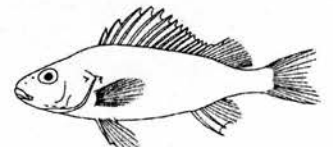
Pink salmon



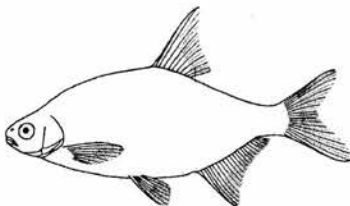
Rudd



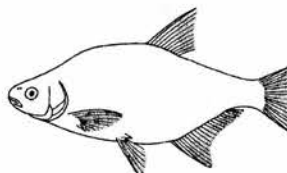
Roach



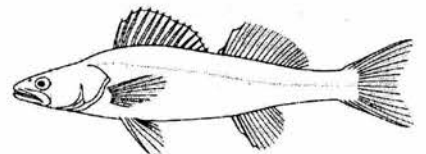
Ruffe



Silver bream

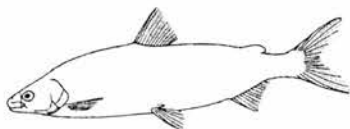


Bream

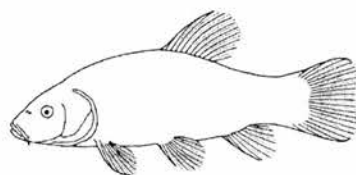


Zander

Illustrations of Fish Species (contd)



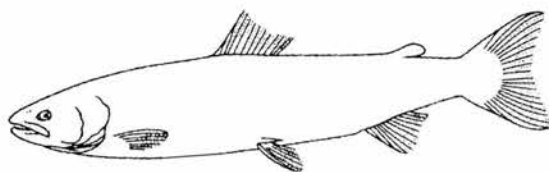
Whitefish



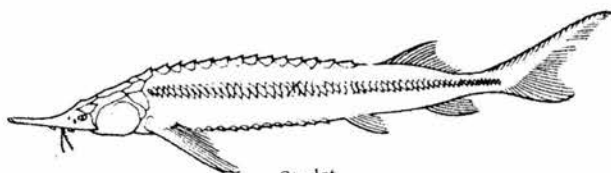
Tench



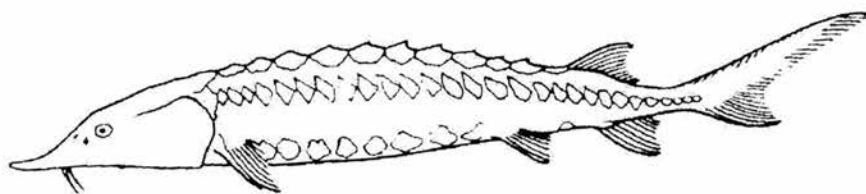
Pike



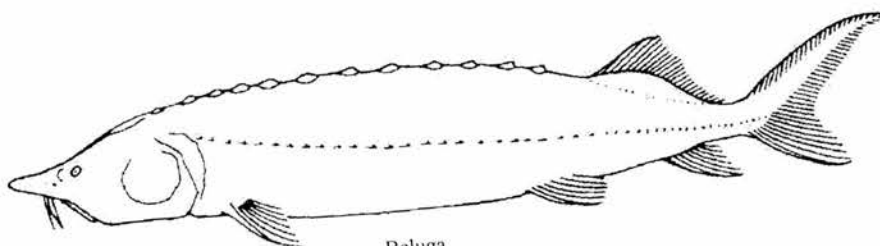
Salmon



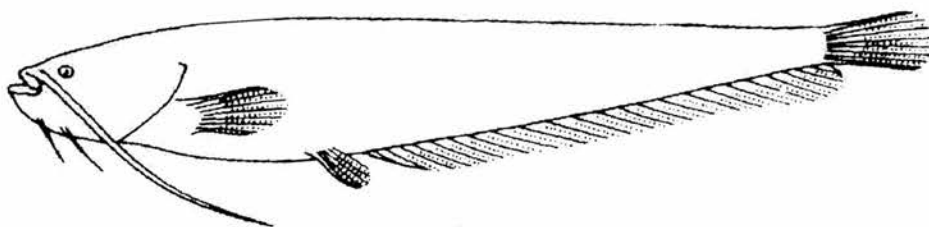
Sterlet



Sturgeon



Beluga



Catfish

Glossary of Terminology

<i>agnathans</i>	jawless fish
<i>anadromous</i>	marine living species that enter freshwater to spawn
<i>autolysis</i>	the destruction of cells and tissues of an organism by enzymes produced by the cells themselves
<i>benthic</i>	bottom living
<i>benthopelagic</i>	living immediately above the sea bed in deep water
<i>biomass</i>	the total number of living organisms in a given area, expressed in terms of living or dry weight per unit area
<i>brown eel</i>	immature eel, <i>ca.</i> 1-3 years old, inhabiting freshwater
<i>catadromous</i>	freshwater living species that enter marine water to spawn
<i>ciguatera</i>	potentially fatal illness affecting the gastrointestinal and nervous systems caused by consumption of fish that contain ciguatoxin (produced by dinoflagellates) and its derivatives
<i>crepuscular</i>	pertaining to periods of twilight
<i>demersal</i>	living on or buried in the sea bed
<i>dinoflagellate bloom</i>	a unicellular microorganism that may multiply under specific conditions to become harmful algal blooms (HAB) that release toxins poisonous to marine organisms and human consumers of these organisms
<i>elasmobranchs</i>	primitive cartilaginous species with plate-like gills, such as sharks and skate
<i>euryhaline</i>	species tolerant of a wide range of salinity
<i>eutrophication</i>	the progress of a lake toward a eutrophic condition, <i>i.e.</i> over-enriched by nutrients (usually phosphorous and nitrogen) which leads to excessive plant growth; algae in open water, attached algae along the shoreline, and higher plants near the shore zone. Eutrophication may trigger HABs or can stimulate the growth of harmful algae
<i>fish pulse</i>	a fishing implement taking the form of a wooden disc on a cylindrical shaft which is used to beat water to frighten fish toward gear
<i>helminth</i>	any parasitic worm (but usually a fluke or nematode worm)
<i>isinglass</i>	a gelatine made from the air bladders of freshwater fish, used as a clarifying agent and adhesive
<i>MNI</i>	minimum number of individuals
<i>NISP</i>	number of identifiable specimens
<i>otolith</i>	incrementally growing deposit of calcium carbonate within the inner ear

<i>pelagic</i>	occupying the main water column beyond the continental shelf
<i>photoperiod</i>	period of effective daylight
<i>phylogenetic</i>	system of classification that aims to demonstrate evolutionary history or species relatedness
<i>poikilotherms</i>	cold-blooded animals, those in which body temperature is regulated by environmental temperature
<i>scutes</i>	a horny or chitinous plate on the skin of the fish
<i>sigmoidal</i>	S-shaped
<i>silver eel</i>	mature eel, <i>ca.</i> 3-4 years old, just prior to spawning migrations
<i>teleost</i>	bony fish
<i>thigmotaxic</i>	species that seek shelter as an adaptive response to danger
<i>trophic level</i>	position in the food chain, determined by the number of energy-transfer steps to that level
<i>thermocline</i>	boundary delimiting a rapid change in temperature in the water column
<i>upwelling</i>	the transport of subsurface water to the surface
<i>yellow eel</i>	immature eel, inhabiting marine or entering freshwater, also known as elver

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